

Raymond White
Director
Planning and Zoning
Department



Matthew
Williams
Deputy Director
Planning and
Zoning
Department

TO: Mayor and City Council

FROM: Planning and Zoning Department

SUBJECT: RZ-23-003

ADDRESS: 4700 Browns Mill Road

MEETING DATE: October 3, 2023

Summary: Applicant is seeking a major modification of the conditions of the subject property to change the conditions from zoning case number CZ-05-32, to allow for 46 Single-Family Detached Dwellings.

STAFF RECOMMENDATION: 3 APPROVALS AND 1 DENIAL with 1 additional condition

PLANNING COMMISSION RECOMMENDATION: Deferral to address the issue traffic, design/elevations, price point, and undeveloped land use for a green space.



RZ-23-003

Planning and Zoning Department

District #4: George Turner, Jr.

PROPERTY INFORMATION	
Location of Subject Property: 4700 Browns Mill Road	
Parcel Number: 16-012-01-007	
Road Frontage: Browns Mill Road	Total Acreage: 24.02 +/-
Current Zoning: RSM (Small Lot Residential Mix)	Overlay District: N/A
Future Land Use Map/ Comprehensive Plan: SUB (Suburban)	
Zoning Request: Applicant is seeking a major modification of conditions of the subject property to change the conditions from zoning case number CZ-05-32, to allow for 46 Single-Family Detached Dwellings.	
Zoning History (CZ-05-32): Subject property went through a rezoning process in June 2005 by way of Dekalb County. The applicant was City of Hope Ministries, Incorporation who desired to construct a townhome subdivision.	

APPLICANT / PROPERTY OWNER INFORMATION
Applicant Name: Battle Law P.C.
Applicant Address: 3562 Habersham at North Lake, Building J, Suite 100
Property Owner Name: Ray of Hope Christian Church Disciples of Christ, Inc.
Property Owner Address: 4700 Browns Mill Road



DETAILS OF ZONING REQUEST

The rezoning case, **CZ-05-32**, initially went through the entitlement process in 2005 by way of Dekalb County. The Applicant at that time, City of Hope Ministries, Inc. petitions to rezone subject property from R-100 to RA-8 to allow for a senior community of 112 attached townhome units. The petition was approved on June 14, 2005, with ten (10) conditions.

The Applicant, Battle Law P.C., on the behalf of the property’s owner, Ray of Hope Christian Church Disciples, is seeking to develop 46 single-family detached homes on the subject parcel. The Applicant is seeking a Major Modification of Conditions of the Subject Property to change the following conditions from zoning case number CZ-05-32 to allow for the development: conditions 1, 6, 7, and 10. The original conditions are listed below with the proposed changes in red.

Condition 1: The maximum number of units shall be ~~112 single-family attached townhome units.~~ **49 single-family detached units.**

Condition 6: The proposed development shall be conditioned upon the ~~concept site plan prepared by James Harwiek & Partners, dated March 3, 2005.~~ **final site plan submitted to the Planning Department prior to the final City Council hearing.**

Condition 7: Any and all single-family ~~attached townhome unit(s)~~ **detached units** shall have a minimum heated floor area of ~~700~~ **1,200** square feet.

Condition 10: ~~The entrance to the development shall be gated, and fencing around the community shall be black aluminum with columns of either brick or stacked stone.~~ **DELETE**

ADJACENT ZONING & LAND USE

NORTH	Zoning: R-100 (Residential Medium Lot)	Land Use: Single-Family Dwellings
SOUTH	Zoning: R-100 (Residential Medium Lot)	Land Use: More Than Conquerors Church
EAST	Zoning: R-100 (Residential Medium Lot)	Land Use: Single-Family Dwellings
WEST	Zoning: R-100 (Residential Medium Lot)	Land Use: Single-Family Dwellings



PHYSICAL CHARACTERISTICS & INFRASTRUCTURE

The site is currently undeveloped with one (1) road frontage (Browns Mill Road). There are floodplain and/or statewaters on the subject property.

MODIFICATIONS AND CHANGES TO APPROVED CONDITIONS OF ZONING CRITERIA

1. The movement of any building or structure adjacent to an exterior boundary line, closer to the boundary line of the property;
2. Any increase in the number of dwelling units or any increase in the total amount of floor space of any nonresidential building;
3. Any decrease in the size of residential units imposed in the original conditional zoning amendment;
4. Any change in any buffer requirements imposed in the original conditional zoning amendment;
5. Any increase in the height of any building or structure;
6. Any change in the proportion of floor space devoted to different authorized uses; or
7. Any change to conditions, except minor changes, as defined in subsection A. of this section, imposed by the city council when approving any change to the official zoning map, commonly referred to as a rezoning or a zoning amendment.

RECOMMENDATION

Staff recommends the following:

- **APPROVAL** of Modification of Condition 1
- **APPROVAL** of Modification of Condition 6
- **APPROVAL** of Modification of Condition 7
- **DENIAL** of Modification of Condition 10

Recommended Approval Condition(s):

1. The development shall be subject to senior housing only.

The Planning Commission recommends deferral to address issues of the community.



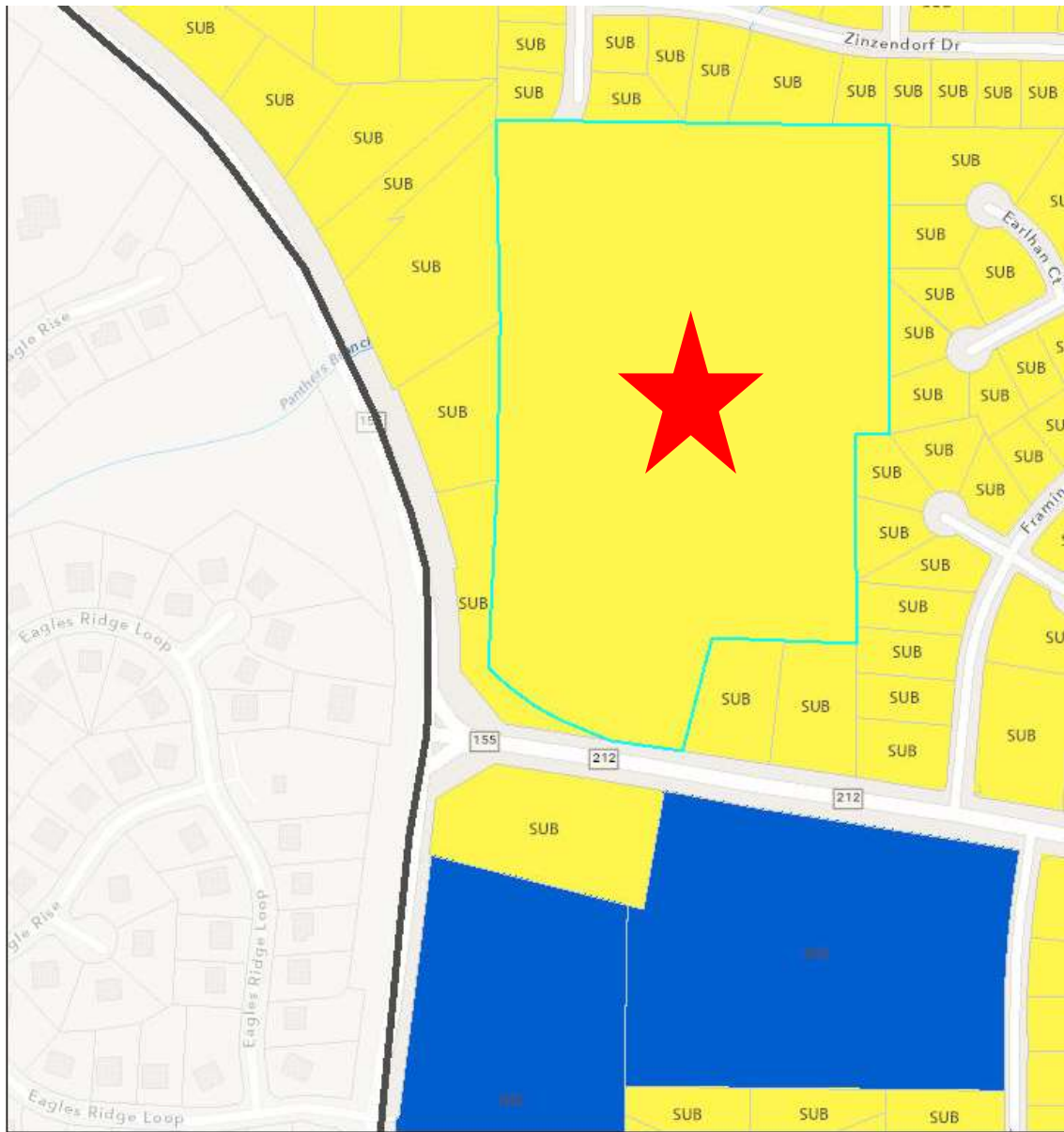
RZ-23-003

Planning and Zoning Department

Attachments Included:

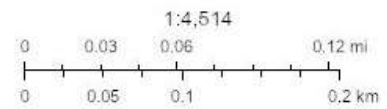
- **Future Land Use Map**
- **Zoning Map**
- **Aerial Map**
- **Site Plan/Survey**
- **Zoning Conditions**
- **Letter of Intent**
- **Environmental Site Analysis**
- **Traffic Study**

Future Land Use Map

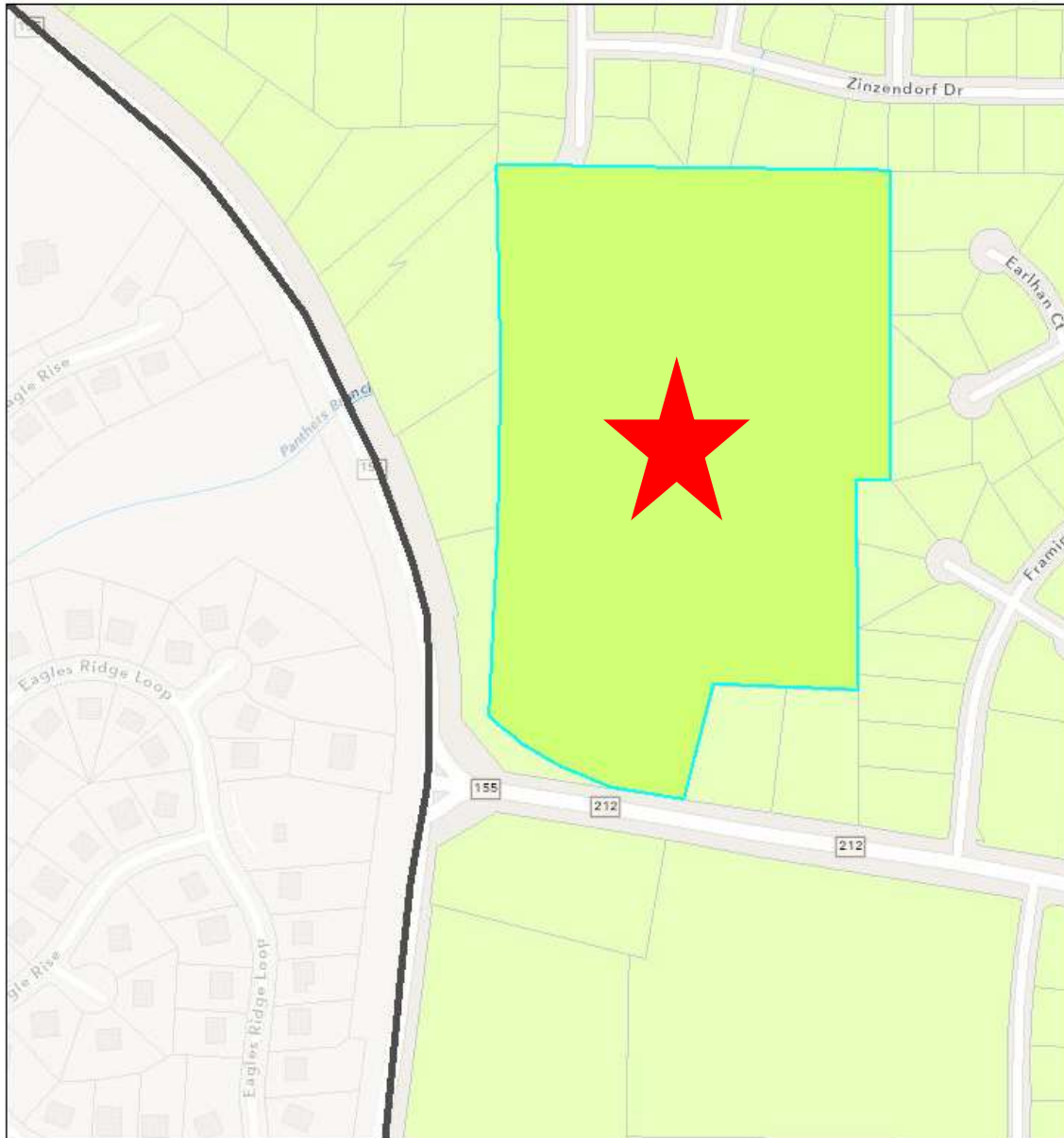


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|---|--------------------|---|-----------------|
|  | Stonecrest Parcels |  | Future Land Use |
|  | City Limits |  | Institutional |
|  | DeKalb Parcels |  | Suburban |

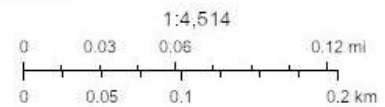


Zoning Map

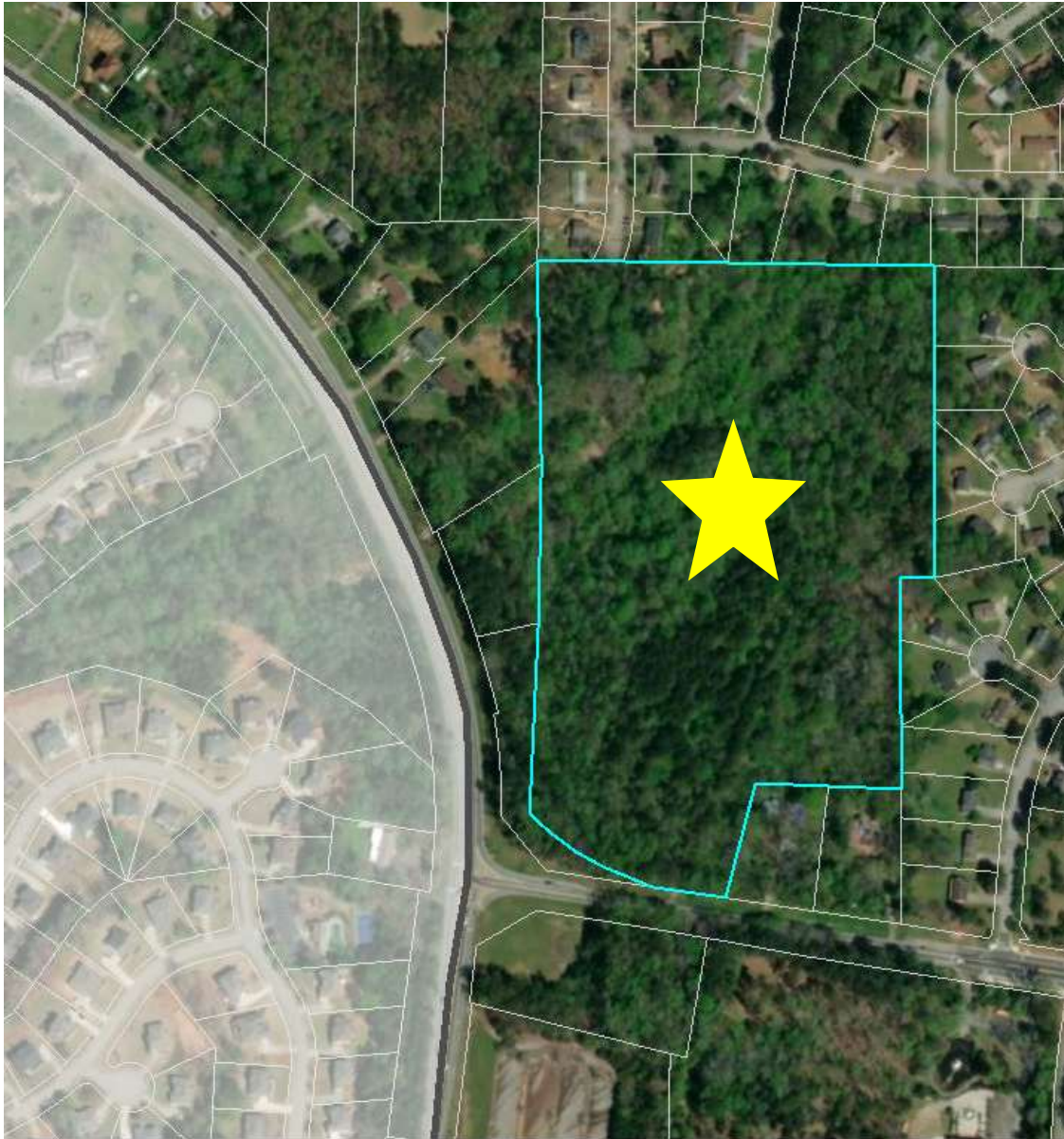


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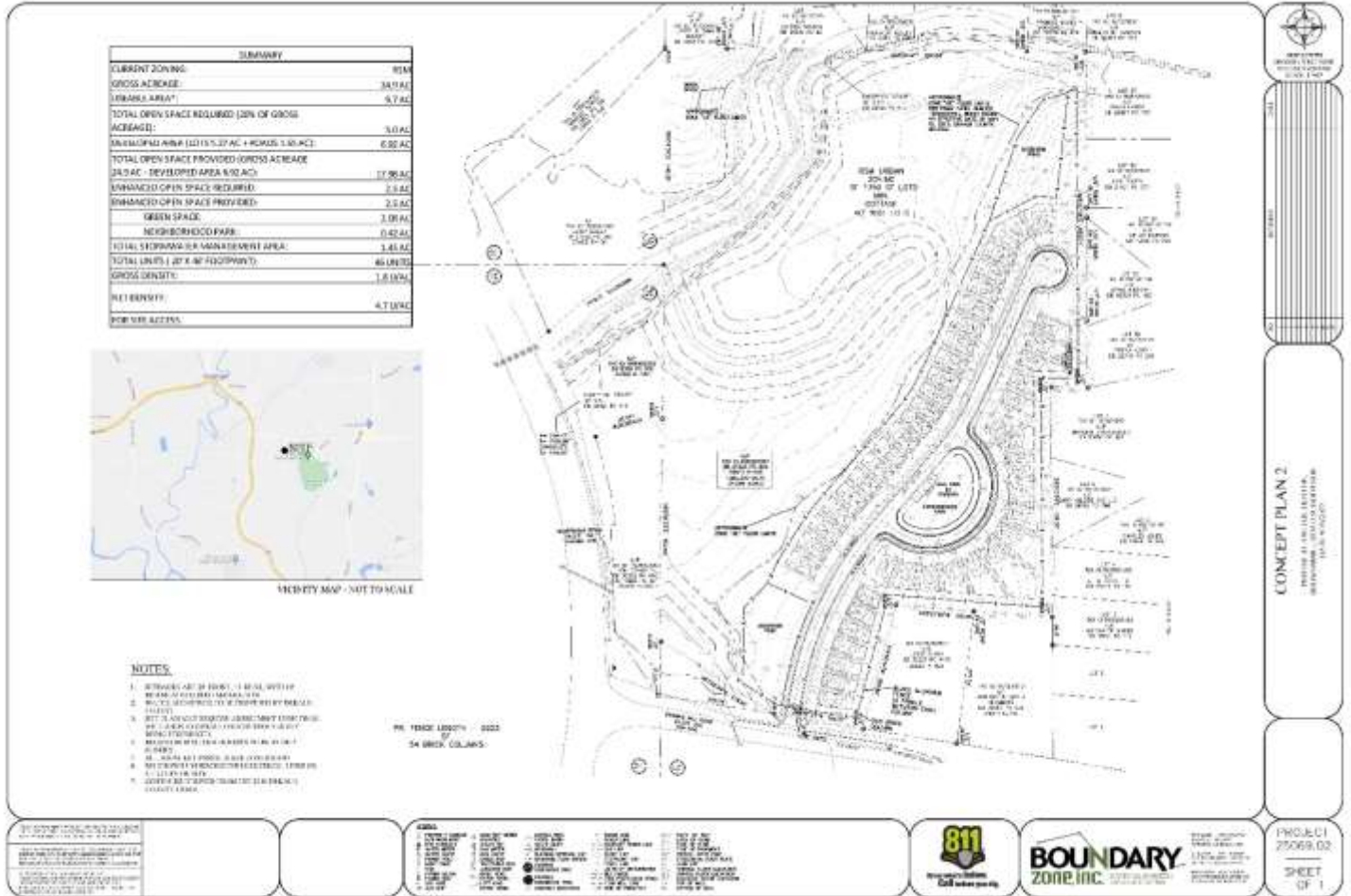
- | | | |
|---|--------------------|---|
|  | Stonecrest Parcels | Zoning |
|  | City Limits |  R-100 - Residential Med Lot |
|  | DeKalb Parcels |  RSM - Small Lot Residential Mix |



Aerial Map



Submitted Site Plan





Zoning Conditions – CZ-05-32

COMM. _____
ITEM NO. H-11 6/14/05
CLERK'S OFFICE Comm. H. Johnson

City Of Hope Ministries, Inc.
Z-05-32
Rezoning Conditions

1. The maximum number of units shall be 112 single family attached townhome units.
2. The development ^{shall} ~~will~~ include sidewalks on both sides of ^{all} ~~internal~~ streets, underground utilities, and streetlights.
3. There shall be no vinyl or aluminum siding used within the development. All buildings shall have exteriors of brick, stucco, stone or other masonry, "Hardi-Plank" clapboards, cedar shake or shingles, or some combination of these materials.
4. The applicant agrees to provide for adequate turn lanes into the development ^{as determined by} ~~subject to approval of~~ DeKalb and Georgia DOT.
5. Each entrance to the development ^{will} ~~shall~~ have a decorative landscaped entrance. The design plan shall be submitted with the sketch plat approval application and shall be subject to review ^{County} ~~City~~ approval by the Planning Commission.
6. The proposed development shall be conditioned upon the concept site plan prepared by James Harwick Partners dated March 3, 2005.
7. Any and all single family attached townhome unit(s) shall have a minimum heated floor area of 700 square feet.
8. There shall be an entrance monument identifying the development, to be constructed out of brick or stacked stone.
9. The roofing materials shall ^{be} ~~include~~ three dimensional, architectural styled shingles.
10. The entrance to the development shall be gated, and fencing around the community shall be black aluminum with columns of either brick or stacked stone.

including the decorative landscaped entrance
gfcg

gfcg

6/14/05



RZ-23-003

Planning and Zoning Department

Letter of Intent



Battle Law

STATEMENT OF INTENT

and

Other Material Required by
the City of Stonecrest Zoning Ordinance
For
A Major Modification of Conditions to
Allow for 46 Single-Family Detached Homes not Restricted to Senior Living

of

**Ray of Hope Christian Church Disciples of Christ, Inc.
c/o Battle Law, P.C.**

for

+/-24.9 Acres of Land
Being 4700 Browns Mill Road
Stonecrest, Georgia and
Parcel Nos. 16 012 01 007

Submitted for Applicant by:

Michèle L. Battle, Esq.
Battle Law, P.C.
Habersham at Northlake, Building J, Suite 100
Tucker, Georgia 300384
(404) 601-7616 Phone
(404) 745-0045 Facsimile
mlb@battlelawpc.com



Battle Law

I. LETTER OF INTENT

Ray of Hope Christian Church Disciples of Christ, Inc. (the "Applicant") is seeking to develop on +/- 24.9 acres of land being Tax Parcel No. 16 012 01 007 having frontage on 4700 Browns Mill Road (the "Subject Property") with 46 single-family detached homes. The property is currently zoned RSM (with conditions according to CZ-05-32) with a Suburban future land use designation. The Applicant is seeking a Major Modification of Conditions of the Subject Property to change a zoning condition of CZ-05-32 which restricts the use of the Subject Property to senior living only.

This document serves as a statement of intent, analyzes the criteria under the Stonecrest Code of Ordinances, and contains notice of constitutional allegations as a reservation of the Applicant's rights.

II. PROPERTY HISTORY

The Applicant and/or its affiliated entity, City of Hope, Inc., have owned the Subject Property for over thirty-five (35) years. The Applicant has wanted to develop senior housing on the Subject Property for decades. So, in 2005 the Applicant worked with a developer to rezone the Subject Property to RA-8 (now RSM under the current Code of Ordinances) to develop 122 affordable senior apartments in a townhome configuration. After the rezoning, the deal with the developer fell through. For the last sixteen (16) years, the Applicant has tried to sell or partner with others to develop the approved senior community on the Subject Property. Several developers have all concluded that the numbers do not work.

After years of trying, the Applicant has exhausted their efforts and is now looking to use the proceeds from the sale of the Subject Property to support the mission of the Church, including supporting seniors in the area. The Applicant has sought the input of development professionals and determined that the best course of action is to convert the apartment units into for-sale single-family detached homes. To achieve this goal, the Applicant has put together a team of development professionals to guide them through this process so the Applicant can develop the Subject Property for its highest and best use.

II. STONECREST MODIFICATION CRITERIA

A. Whether the zoning proposal is in conformity with the policy and intent of the comprehensive plan;

The zoning proposal is in conformity with the policy and intent of the comprehensive plan. The Applicant is seeking to change the zoning conditions of the Subject Property to no longer restrict the use of the property to senior-only residential. However, this request will not change the zoning district or general use of the Subject Property. Instead, it will remain residential.

B. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties;



Battle Law

The zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties. The surrounding properties are developed with single-family detached homes. The Subject Property is zoned for residential development. This proposal will bring fewer units than is already permitted on the Subject Property and will allow for single-family detached units. Thus, this proposal will allow for a use precisely like the uses on surrounding properties.

C. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;

The Subject Property has no reasonable economic use as currently zoned. The existing conditions limit the use of the Subject Property to a product that cannot be built. The Applicant has tried for sixteen (16) years to develop the Subject Property under the current zoning conditions with no success. It is time to remove the conditions so the Applicant can continue supporting its mission.

D. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

The zoning proposal will not adversely affect adjacent or nearby property's existing use or usability. The proposed community will serve as another residential development to enhance the area's housing market.

E. Whether there are other existing or changing conditions affecting the use and development of the property that provide supporting grounds for either approval or disapproval of the zoning proposal;

The area around the Subject Property is changing as local businesses start up nearby and new business owners update old commercial developments. The area is seeing a resurgence that can positively impact the value of the Subject Property, provided that this Modification of Conditions Application is approved. Without this approval, the Subject Property will have no value to the Applicant or anyone else, thereby depriving the Applicant of the opportunity to sell it for its highest and best use.

F. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources, and

The zoning proposal will not adversely affect historic buildings, sites, districts, or archaeological resources.

G. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.

The zoning proposal will not result in a use that will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.



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III. NOTICE OF CONSTITUTIONAL ALLEGATIONS AND PRESERVATION OF CONSTITUTIONAL RIGHTS

The portions of the City of Stonecrest Zoning Ordinance, facially and as applied to the Subject Property, which restricts or classify or may restrict or classify the Subject Property so as to prohibit its development as proposed by the Applicant are or would be unconstitutional in that they would destroy the Applicant's property rights without first paying fair, adequate and just compensation for such rights, in violation of the Fifth Amendment and Fourteenth Amendment of the Constitution of the United States and Article I, Section I, Paragraph I of the Constitution of the State of Georgia of 1983, Article I, Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and would be in violation of the Commerce Clause, Article I, Section 8, Clause 3 of the Constitution of the United States.

The application of the City of Stonecrest Zoning Ordinance to the Subject Property which restricts its use to any classification other than that proposed by the Applicant is unconstitutional, illegal, null and void, constituting a taking of Applicant's Property in violation of the Just Compensation Clause of the Fifth Amendment to the Constitution of the United States, Article I, Section I, Paragraph I, and Article I, Section III, Paragraph I of the Constitution of the State of Georgia of 1983, and the Equal Protection and Due Process Clauses of the Fourteenth Amendment to the Constitution of the United States denying the Applicant an economically viable use of its land while not substantially advancing legitimate state interests.

A denial of this Application would constitute an arbitrary irrational abuse of discretion and unreasonable use of the zoning power because they bear no substantial relationship to the public health, safety, morality or general welfare of the public and substantially harm the Applicant in violation of the due process and equal protection rights guaranteed by the Fifth Amendment and Fourteenth Amendment of the Constitution of the United States, and Article I, Section I, Paragraph I and Article I, Section III, Paragraph 1 of the Constitution of the State of Georgia

A refusal by the City of Stonecrest Mayor and Council to amend the land use and/or rezone the Subject Property to the classification as requested by the Applicant would be unconstitutional and discriminate in an arbitrary, capricious and unreasonable manner between the Applicant and owners of similarly situated property in violation of Article I, Section I, Paragraph II of the Constitution of the State of Georgia of 1983 and the Equal Protection Clause of the Fourteenth Amendment to the Constitution of the United States. Any Major Modification of Conditions of the Property subject to conditions which are different from the conditions requested by the Applicant, to the extent such different conditions would have the effect of further restricting Applicant's utilization of the property, would also constitute an arbitrary, capricious and discriminatory act in zoning the Subject Property to an unconstitutional classification and would likewise violate each of the provisions of the State and Federal Constitutions set forth hereinabove.



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A refusal to allow the land use amendment and/or Major Modification of Conditions in questions would be unjustified from a fact-based standpoint and instead would result only from constituent opposition, which would be an unlawful delegation of authority in violation of Article IX, Section II, Paragraph IV of the Georgia Constitution.

A refusal to allow the land use amendment and/or Major Modification of Conditions in question would be invalid inasmuch as it would be denied pursuant to an ordinance which is not in compliance with the Zoning Procedures Law, O.C.G.A Section 36-66/1 et seq., due to the manner in which the Ordinance as a whole and its map(s) have been adopted.

The existing land use designation and/or zoning classification on the Subject Property is unconstitutional as it applies to the Subject Property. This notice is being given to comply with the provisions of O.C.G.A. Section 36-11-1 to afford the County an opportunity to revise the Property to a constitutional classification. If action is not taken by the County to rectify this unconstitutional land use designation and/or zoning classification within a reasonable time, the Applicant is hereby placing the County on notice that it may elect to file a claim in the Superior Court of Fulton County demanding just and adequate compensation under Georgia law for the taking of the Subject Property, diminution of value of the Subject Property, attorney's fees and other damages arising out of the unlawful deprivation of the Applicant's property rights.

III. CONCLUSION

For the foregoing reasons, the Applicant hereby requests that the application for a Major Modification of Conditions to allow for 46 single-family detached homes not restricted to senior living be approved. The Applicant welcomes any questions and feedback from the planning staff.

On this 6th day of June 2023

Respectfully submitted,

Michele L. Battle, Esq.
Attorney for the Applicant



Battle Law

July 11, 2023

VIA EMAIL

Tre'Jon Singletary, Senior Planner
City of Stonecrest
3120 Stonecrest Blvd., Suite 190
Stonecrest, GA 30038

Re: 4700 Browns Mill Road Zoning Condition Amendments

Dear Tre'Jon,

In connection with the Change of Condition Application filed for Ray of Hope, below are the conditions that we would like amended from DeKalb County Board of Commissioners Case No.: CZ-05-32:

1. Condition 1: The maximum number of units shall be 49 single family detached units.
2. Delete Conditions 6 and substitute therefore, the final site plan submitted to the Planning Department prior to the final City Council hearing.
3. Delete Condition 7, and substitute therefore a minimum heated floor area of 1,200 sq. ft.
4. Delete Condition 10. The prior community was to be a multi-family complex with internal driveways. This will be a fee simple single family detached community. There are not enough units to support having a gated entry and fence around the perimeter of the project based on the size of the subject property and the maintenance costs.

Please feel free to contact me should you have any questions.

Respectfully,

Michèle L. Battle, Esq.



RZ-23-003

Planning and Zoning Department

Environmental Site Analysis



Environmental Site Analysis

Analyze the impact of the proposed rezoning and provide a written point-by-point response to Points 1 through 3: 1. Conformance to the Comprehensive Plan:

- a. Describe the proposed project and the existing environmental conditions on the site.

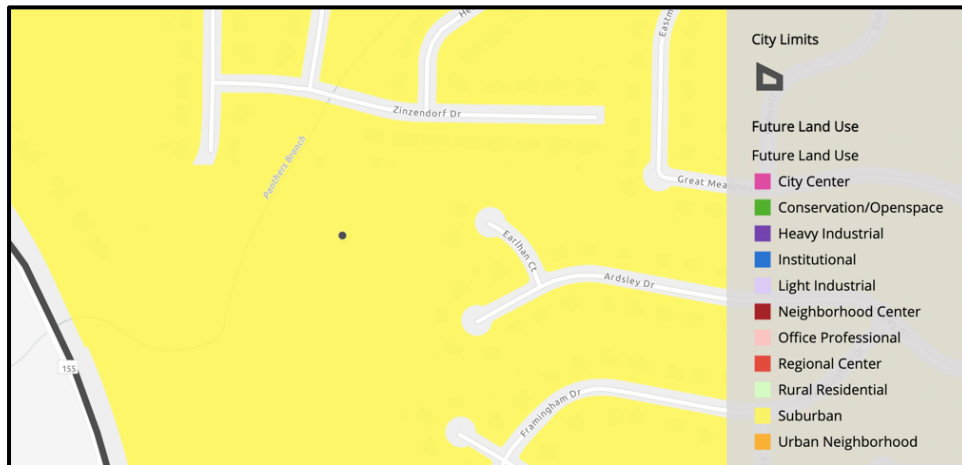
The Applicant is seeking to rezone the Subject Property, being Parcel No. 16 012 01 007 from RSM with conditions to RSM other conditions to allow for 46 single-family detached units.

- b. Describe adjacent properties. Include a site plan that depicts the proposed project.

Adjacent properties are primarily residential; RSM immediately adjacent and R-100 outside of that.

- c. Describe how the project conforms to the Comprehensive Land Use Plan.

The Future Land Use designation of the Subject Property is Suburban. The proposed change in conditions and proposed forty-six (46) unit single-family detached community both conform to the Comprehensive Land Use Plan, as they both fall within the Suburban Land Use category. The Applicant is not seeking to change the current zoning classification of the Subject Property, but rather change the zoning conditions. Include the portion of the Comprehensive Plan Land Use Map which supports the project's conformity to the Plan.



- d. Evaluate the proposed project with respect to the land use suggestion of the Comprehensive Plan as well as any pertinent Plan policies.

The proposed project is in conformance with the land use suggestion of the Comprehensive Plan and pertinent Plan policies. The Plan allows for RSM zoning within the Suburban Land Use designation. The proposed density is also supported by the Suburban land use designation.



2. Environmental Impacts of The Proposed Project

For each environmental site feature listed below, indicate the presence or absence of that feature on the property. Describe how the proposed project may encroach or adversely affect an environmental site feature. Information on environmental site features may be obtained from the indicated source(s).

a. Wetlands

- U. S. Fish and Wildlife Service, National Wetlands Inventory (<http://wetlands.fws.gov/downloads.htm>)
- Georgia Geologic Survey (404-656-3214)
- Field observation and subsequent wetlands delineation/survey if applicable

To the Applicant’s knowledge, there are no wetlands on the

property. b. Floodplain

- Federal Emergency Management Agency (<http://www.fema.org>)
- Field observation and verification

There is a floodplain on the Northwestern portion of the Subject Property.

c. Streams/stream buffers

- Field observation and verification

There is a river, Panther’s Branch, and buffer that intersects the Northwestern portion of the Subject Property.

d. Slopes exceeding 25 percent over a 10-foot rise in elevation

- United States Geologic Survey Topographic Quadrangle Map
- Field observation and verification

To the Applicant’s knowledge, there are no slopes exceeding 25% over a 10-foot rise in elevation.

e. Vegetation • United States Department of Agriculture, Nature Resource Conservation Service

- Field observation

The property is heavily wooded.

f. Wildlife Species (including fish)

- United States Fish and Wildlife Service
- Georgia Department of Natural Services, Wildlife Resources Division, Natural Heritage Program
- Field observation

To the Applicant’s knowledge, there are no wildlife habitats on the property.

g. Archeological/Historical Sites

- Historic Resources Survey
- Georgia Department of Natural Resources, Historic Preservation Division
- Field observation and verification

To the Applicant’s knowledge, there are no archeological/historical sites.



3. Project Implementation Measures

Describe how the project implements each of the measures listed below as applicable. Indicate specific implementation measures required to protect environmental site feature(s) that may be impacted.

- a. Protection of environmentally sensitive areas, i.e., floodplain, slopes exceeding 25 percent, river corridors.

The applicant will do whatever deemed necessary to protect environmentally sensitive

- areas. b. Protection of water quality

The applicant will do whatever deemed necessary to protect water quality.

- c. Minimization of negative impacts on existing infrastructure

The applicant will do whatever deemed necessary to minimize negative impacts on existing infrastructure.

- d. Minimization on archeological/historically significant areas

To the Applicant's knowledge, there are no archeological/historically significant areas on the property.

- e. Minimization of negative impacts on environmentally stressed communities where environmentally stressed communities are defined as communities exposed to a minimum of two environmentally adverse conditions resulting from public and private municipal (e.g., solid waste and wastewater treatment facilities, utilities, airports, and railroads) and industrial (e.g., landfills, quarries and manufacturing facilities) uses.

To the Applicant's knowledge, the community is not an environmentally stressed one.

- f. Creation and preservation of green space and open space



The proposed development includes 19.4 acres of open space, including 1.9 acres of enhanced open space.

- g. Protection of citizens from the negative impacts of noise and lighting

The proposed single family-detached community minimally impact current citizens in terms of noise and lighting.

- h. Protection of parks and recreational green space

To the Applicant's knowledge, the proposed development will not adversely impact existing parks and recreational green space.

- i. Minimization of impacts to wildlife habitats

To the Applicant's knowledge, there is no nearby wildlife habitats.



RZ-23-003

Planning and Zoning Department

Traffic Study

TRAFFIC IMPACT STUDY

FOR

Browns Mill Road Subdivision

Stonecrest, GA

Prepared By:



2470 Sandy Plains Road
Marietta, GA 30066

September 6, 2023

Table of Contents

LIST OF TABLES ii

LIST OF FIGURES ii

APPENDICES ii

EXECUTIVE SUMMARY iii

INTRODUCTION 1

PROJECT DESCRIPTION 1

 Study Network 2

 Roadway Conditions 2

EXISTING TRAFFIC CONDITIONS 3

 Historical Growth Rate 3

 Level of Service Methodology 5

 Existing Level of Service 6

FUTURE CONDITIONS – WITHOUT THE PROPOSED DEVELOPMENT (NO - BUILD) 7

 Future No - Build Traffic Volumes 7

 Future No - Build Level of Service 8

PROPOSED DEVELOPMENT 9

 Trip Generation 9

 Trip Distribution and Assignment 9

 Auxiliary Lane Analysis 12

FUTURE CONDITIONS- WITH THE PROPOSED DEVELOPMENT (BUILD) 11

 Future Build Traffic Volumes 11

 Future Build Level of Service 13

Conclusion and Recommendations 15

APPENDICES 16



LIST OF TABLES

Table 1: Existing Traffic Volume 3

Table 2: GDOT Historical Growth Rate..... 4

Table 3: Growth Rate Based on ARC Travel Demand Model 4

Table 4: Georgia Governor’s Office of Planning and Budget Annual Population Estimates 4

Table 5: U.S. Census Bureau Annual Estimates of the Resident Population 4

Table 6: Level of Service for Signalized and Unsignalized Intersections..... 5

Table 7: Level of Service and Delay for Existing Year (2023) 7

Table 8: Future No - Build Level of Service (2026) 9

Table 9: Proposed Site Trip Generation 9

Table 10: Left-Turn Lane Requirements 11

Table 11: Right-Turn Lane Requirements..... 11

Table 12: Traffic Operations and ICE Scores 13

Table 13: Future Build Level of Service 13

Table 14: LOS Comparison 14

LIST OF FIGURES

Figure 1 Location Map..... 1

Figure 2 Aerial of Study Area 3

Figure 3 Existing (2023) Peak Hour Volumes 6

Figure 4 Future No-Build (2026) Peak Hour Volumes..... 8

Figure 5 Site-Generated Trip Distribution 10

Figure 6 Future Build (2026) Peak Hour Volumes 12

APPENDICES

- Appendix A: Site Plan
- Appendix B: Traffic Counts Summary Sheets
- Appendix C: Growth Rate Summary
- Appendix D: Synchro Reports
- Appendix E: Trip Generation Report
- Appendix F: ICE Analysis



EXECUTIVE SUMMARY

Browns Mill Road Subdivision is a proposed residential development to be built on approximately 25 acres of undeveloped land in Stonecrest, GA. The site is located on the northeast corner of the intersection of SR 155 / Snapfinger Road at SR 212 / Browns Mill Road. The development includes 46 single-family housing units and will have a single driveway accessing SR 212 / Browns Mill Road. The build-out of the development is planned for 2026. This study analyzed existing and future peak hour traffic operations and capacity analysis for the study intersections to determine if recommendations to the existing roadway network should be made to accommodate the new traffic and determine how the new driveways should be controlled.

This study analyzed the impacts the additional development's generated trips are expected to have on the surrounding roadway network and study intersections. The study intersections are listed below:

1. SR 212 / Browns Mill Road at SR 155 / Snapfinger Road
2. SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive
3. SR 212 / Browns Mill Road at Salem Road
4. SR 212 / Browns Mill Road at Browns Mill Park (New Intersection)

The ITE Trip Generation Manual, was referenced to estimate the trips generated by the land use to calculate the total gross trips expected to be generated from the residential development. The expected trips were added to the expected future volumes to analyze the delay and level of service at the study intersections in the build condition and compare to the existing and no-build conditions.

In existing and no-build conditions, several of the approaches of the existing intersections on SR 212 / Browns Mill Road operate unacceptably. The signalized intersection of SR 155 / Snapfinger Road at SR 212 / Browns Mill Road operates at LOS E in the no-build scenario during the AM peak hour. Both Framingham Drive and Burlingham Drive operate unacceptably. The Browns Mill Road Subdivision development has a nominal impact on the delay of the surrounding study network. The additional development traffic does not result in reduced levels of service for any of the adjacent intersections.

The development driveway, Browns Mill Park, accessing SR 212 / Browns Mill Road is expected to operate at an acceptable level of service, upon completion of the development. The geometry and method of control for the access driveway intersection was determined utilizing GDOT's auxiliary lane requirements and ICE tool.

The following is the recommended configuration for the driveway intersection:

SR 212 / Browns Mill Road at Browns Mill Park

- Browns Mill Park should be two lanes, one entry and one exit lane.
- Browns Mill Park should be full access and stop sign controlled.
- Provide a westbound right-turn lane on SR 212 / Browns Mill Road
- Provide a channelized right-turn on Browns Mill Park.

No other roadway improvements are recommended for this development.



INTRODUCTION

A traffic impact study was conducted by Southeastern Engineering, Inc. for the proposed Browns Mill Road Subdivision development located in Stonecrest, GA. The development will be built on approximately 25 acres of undeveloped land, located on northeast corner of the intersection of SR 155 / Snapfinger Road at SR 212 / Browns Mill Road. The development will include 46 single-family homes and have a single new driveway accessing SR 212 / Browns Mill Road. The build-out of the development is planned for 2026. An overall location map of the area near the site location is shown in **Figure 1**.

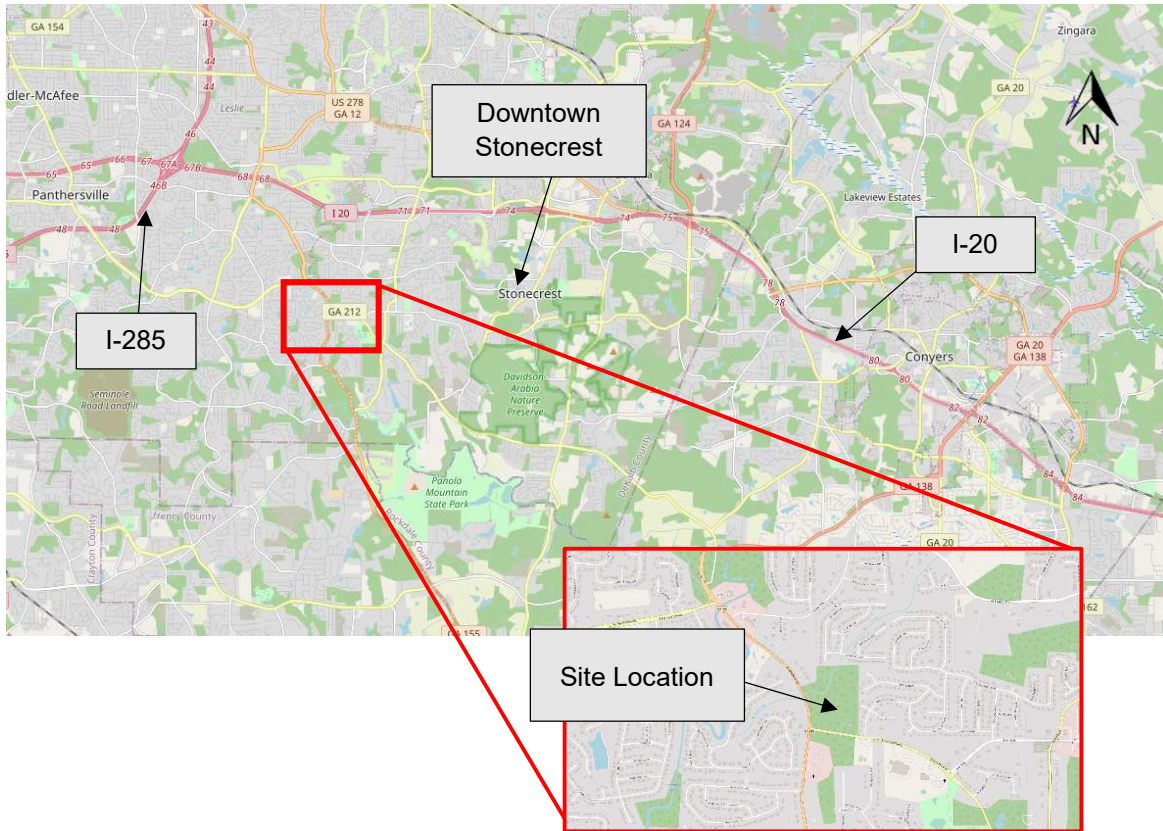


Figure 1 Location Map

This study will identify the potential impacts of the proposed development traffic on the surrounding roadway network. The study includes the existing and future peak hour traffic operations and capacity analysis for the study intersections. As necessary, operational improvements will be identified and analyzed to mitigate the traffic impacts caused by the development. Based on the results of the analysis for the study intersections, recommendations will be made for intersection geometry and control method.

PROJECT DESCRIPTION

The development will include 46 single-family homes and one new driveway along SR 212 / Browns Mill Road. This study analyzes traffic impact upon the full built-out of the proposed development, planned for 2026. The site plan is attached in **Appendix A**.



Study Network

The traffic study analyzes the current traffic operations for the intersections in the vicinity of the proposed development. Capacity analysis and level of service evaluations of the study intersections were conducted for the existing, future no-build, and build scenarios. The study intersections and their control type are listed below:

1. SR 212 / Browns Mill Road at SR 155 / Snapfinger Road - Signalized
2. SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive – Minor-Street Stop-Control
3. SR 212 / Browns Mill Road at Salem Road – Multilane Roundabout
4. SR 212 / Browns Mill Road at Browns Mill Park - *New Intersection*

Roadway Conditions

The roadway network adjacent to the development was examined for the existing roadway characteristics. An aerial of the study area is shown in **Figure 2**.

SR 212 / Browns Mill Road

SR 212 / Browns Mill Road is a two-lane undivided facility with a posted speed limit of 45 miles per hour. It is classified by GDOT as a minor arterial. It connects to SR 155 to the west and SR 138 to the east. There is curb and gutter on both sides, as well as sidewalk present along the south side of the road in the study area between Framingham Drive and Salem Road.

SR 155 / Snapfinger Road

SR 155 / Snapfinger Road is a four-lane facility with a center two-way left-turn lane north of SR 212 and a two-lane undivided facility south of SR 212. It has a posted speed limit of 45 mph. It is classified by GDOT as a principal arterial. It connects to Flat Shoals Parkway to the north and Fairview Road in the south. There is no curb and gutter or sidewalk present along the road in the study area.

Framingham Drive

Framingham Drive is a two-lane undivided facility with a posted speed limit of 25 miles per hour. It is classified by GDOT as a local road. It serves a residential development. There is curb and gutter on both sides, but no sidewalks present in the study area.

Salem Road

Salem Road is a two-lane undivided facility with a posted speed limit of 40 miles per hour. It is classified by GDOT as a major collector. It connects to SR 212 to the west and Evans Mill Road to the east. There is curb and gutter on both sides, as well as sidewalks present.

Burlingham Drive

Burlingham Drive is a two-lane undivided facility with a posted speed limit of 25 miles per hour. It is classified by GDOT as a local road. It serves a residential development. There is curb and gutter on both sides, as well as sidewalk on the east side.





Figure 2 Aerial of Study Area

EXISTING TRAFFIC CONDITIONS

Existing traffic volumes at the study intersections were collected on Tuesday, August 15th, 2023. Peak hour turning movement counts were collected at the study intersections, and daily traffic volumes were collected on primary roadways near the development. Existing average daily traffic (ADT) volumes collected in the study area are summarized in **Table 1**, existing count data is attached in **Appendix B**. The existing AM and PM peak hour traffic volumes are shown in **Figure 3**.

Table 1: Existing Traffic Volume			
Location	Volume		Total
	Northbound/ Eastbound	Southbound /Westbound	
SR 212 / Browns Mill Road e/o SR 155	8,674	10,939	19,613

Historical Growth Rate

A growth rate for the study area was calculated using annual volume statistics from GDOT’s Traffic Analysis & Data Application, the Atlanta Regional Commission’s Travel Demand Model, and DeKalb County census data. Historical data and calculations from all sources are attached in **Appendix C**. The growth rate calculated using the GDOT’s traffic data is summarized in **Table 2**.



Table 2: GDOT Historical Growth Rate			
Station ID	Location	5-Year Growth Rate	10-Year Growth Rate
089-0247	Browns Mill Rd w/o Salem Road	4.0%	0.1%
089-0201	Snapfinger Rd s/o Cleveland Rd	6.6%	4.2%
089-0198	Snapfinger Rd s/o Cleveland Rd	5.6%	3.3%
089-3563	Thompson Mill Rd w/o Miller Rd	5.2%	5.5%
089-0547	Panola Rd n/o Salem Road	3.4%	0.7%
5 - Year and 10 - Year Average		5.0%	2.8%
Average Growth Rate		3.9%	

Atlanta Regional Commission’s (ARC’s) Travel Demand Model (TDM) was referenced to calculate a growth rate for the study area and is shown in **Table 3**.

Table 3: Growth Rate Based on ARC Travel Demand Model			
Location	10-Year Growth Rate 2020-2030	10-Year Growth Rate 2030-2040	20- Year Growth Rate 2020-2040
SR 212 e/o Snapfinger Rd	1.0%	0.5%	0.7%
Snapfinger Rd s/o SR 212	1.2%	1.4%	1.2%
Snapfinger Rd n/o SR 212	1.0%	1.1%	1.0%
Salem Rd n/o SR 212	2.6%	1.0%	1.6%
SR 212 e/o Salem Road	1.0%	0.5%	0.7%
Panola Rd n/o Salem Rd	1.6%	1.5%	1.4%
10- & 20-Year Averages	1.4%	1.0%	1.1%
Average	1.2%		

Population projection data obtained from the Georgia Governor’s Office of Planning and Budget was used to calculate a growth rate for the study area. The Dekalb County data and estimated growth rate is shown in **Table 4**.

Table 4: Georgia Governor’s Office of Planning and Budget Annual Population Estimates							
Geographic Area	Average 5-Year Growth Rate from 2020 to 2050						
Dekalb County	2020-2025	2026-2030	2030-2035	2035-2040	2040-2045	2045-2050	Average
	1.19%	0.72%	0.46%	0.33%	0.29%	0.22%	0.54%
Geographic Area	Average 10-Year Growth Rate from 2020 to 2050						
Dekalb County	2020-2030		2030-2040		2040-2050		Average
	0.83%		0.41%		0.26%		0.50%

Census data from the U.S. Census Bureau was used to calculate a growth rate for Dekalb County. The growth rate estimated using the U.S. Census Bureau data is shown in **Table 5**. Growth rate data from all sources are attached in **Appendix C**.

Table 5: U.S. Census Bureau Annual Estimates of the Resident Population			
Geographic Area	2010 Census	2020 Census	10-Year Growth Rate
Dekalb County	691,893	764,382	1.00%

An average annual growth rate of 1.9% was used for this study based on the available data to project future year (2026) traffic volumes.



Level of Service Methodology

Intersection capacity analyses were performed using the methodology outlined in the Highway Capacity Manual, 6th Edition (HCM). This methodology is the industry standard for the evaluation of intersection capacity and delay. To facilitate the analysis, computer software Synchro 11 was used. This software conforms to the methodology of the HCM.

An analysis of peak hour traffic conditions was performed to determine the level of service (LOS) at the study intersections. LOS for an intersection is based on vehicular delay at the intersection and is a typical measure of effectiveness used to evaluate intersection operations. The HCM provides ranges of delay for each LOS definition, spanning from very minimal delays (LOS A) to high delays (LOS F). LOS F is considered unacceptable for most drivers.

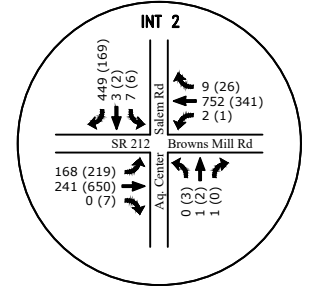
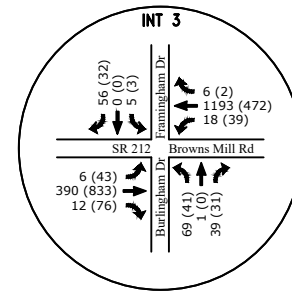
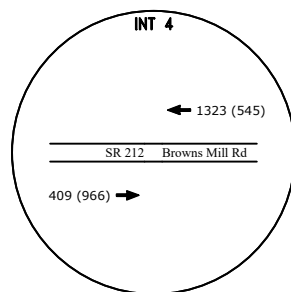
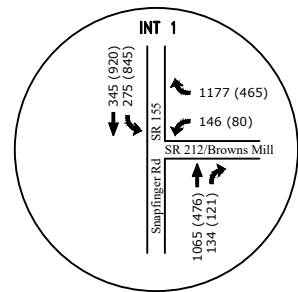
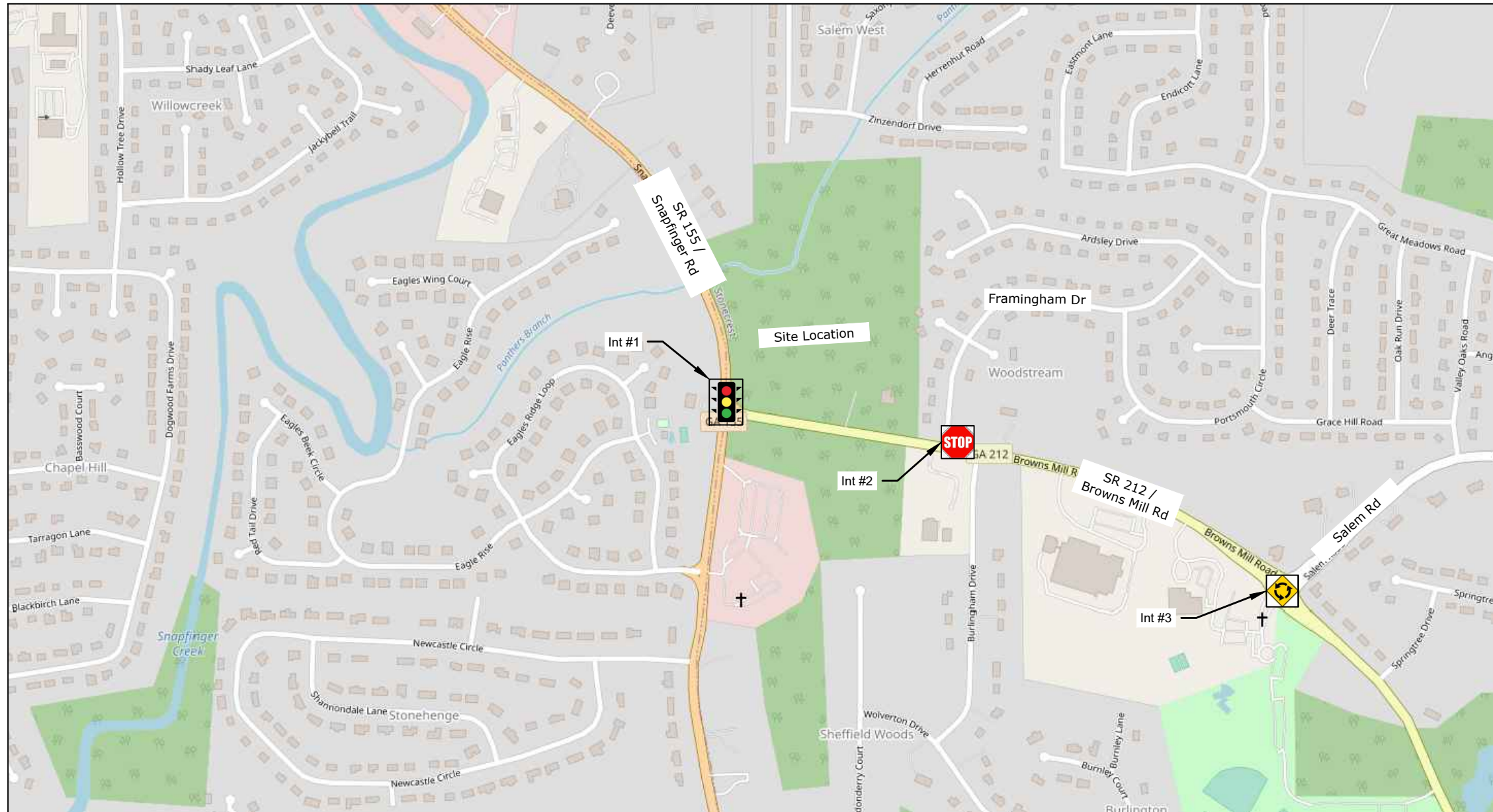
For unsignalized intersections, where a stop signs control side streets or minor streets, the criterion for evaluating traffic operations is the LOS for the controlled turning movements at the intersection. Methodology from the HCM to determine the delay and LOS for these turning movements is based on the following input data including intersection geometry, lane configuration, and turning movement volumes.

For the signalized intersections, LOS is based on the following input data: intersection geometry, lane configuration, turning movement volumes, traffic signal timing.

Table 6 below indicates the relationship between delay and LOS for signalized and unsignalized intersections, respectively.

Table 6: Level of Service for Signalized and Unsignalized Intersections		
Level of Service	Control Delay Per Vehicle (sec)	
	Signalized Intersection	Unsignalized Intersection
A	≤10	≤10
B	>10 and ≤20	>10 and ≤15
C	>20 and ≤35	>15 and ≤25
D	>35 and ≤55	>25 and ≤35
E	>55 and ≤80	>35 and ≤50
F	>80	>50





Legend: AM (PM)

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FIGURE 3



EXISTING (2023)
PEAK HOUR
VOLUMES

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DEVELOPMENT

SHEET NO.

Existing Level of Service

The level of service for the existing conditions was determined using Synchro 11, which follows the HCM methodology. The existing geometric configurations and intersection controls were used for the analysis. For the intersection of SR 212 / Browns Mill Road at Salem Road, GDOT’s Roundabout Analysis Tool was used to analyze the delay at the intersection. Peak hours for the intersections were identified from 0700-0800 for the AM peak hour and 1700-1800 for the PM peak hour.

The westbound approach at the signalized intersection at SR 155 / Snapfinger Road operates unacceptably in both peak hours, but the intersection operates acceptably overall (LOS C-D). The intersection at Framingham Drive / Burlingham Drive operates unacceptably at both minor street approaches. **Table 7** summarizes the results of the intersection capacity analysis for the existing conditions. Detailed Synchro and RAB Tool reports are attached in **Appendix D**.

Table 7: Level of Service and Delay for Existing Year (2023)				
Intersection	Control Type	Approach	Delay (LOS)	
			AM	PM
SR 155 / Snapfinger Road at SR 212 / Browns Mill Road	Signalized	WB	70 (E)	59 (E)
		NB	54 (D)	31 (C)
		SB	40 (D)	19 (B)
		Overall	51 (D)	23 (C)
SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive	Minor-Street Stop-Control	NB	>300 (F)	71 (F)
		SB	39 (E)	16 (C)
SR 212 / Browns Mill Road at Salem Road	Multilane Roundabout	EB	4 (A)	6 (A)
		WB	7 (A)	5 (A)
		NB	4 (A)	6 (A)
		SB	12 (B)	4 (A)
		Overall	7 (A)	5 (A)

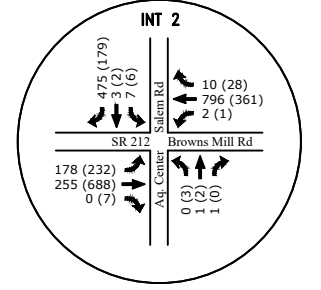
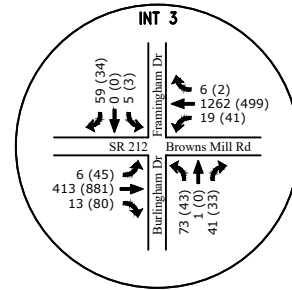
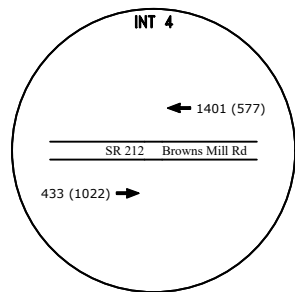
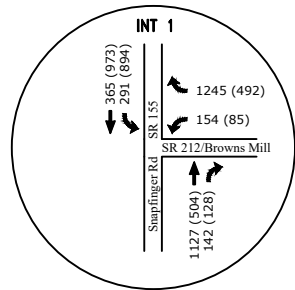
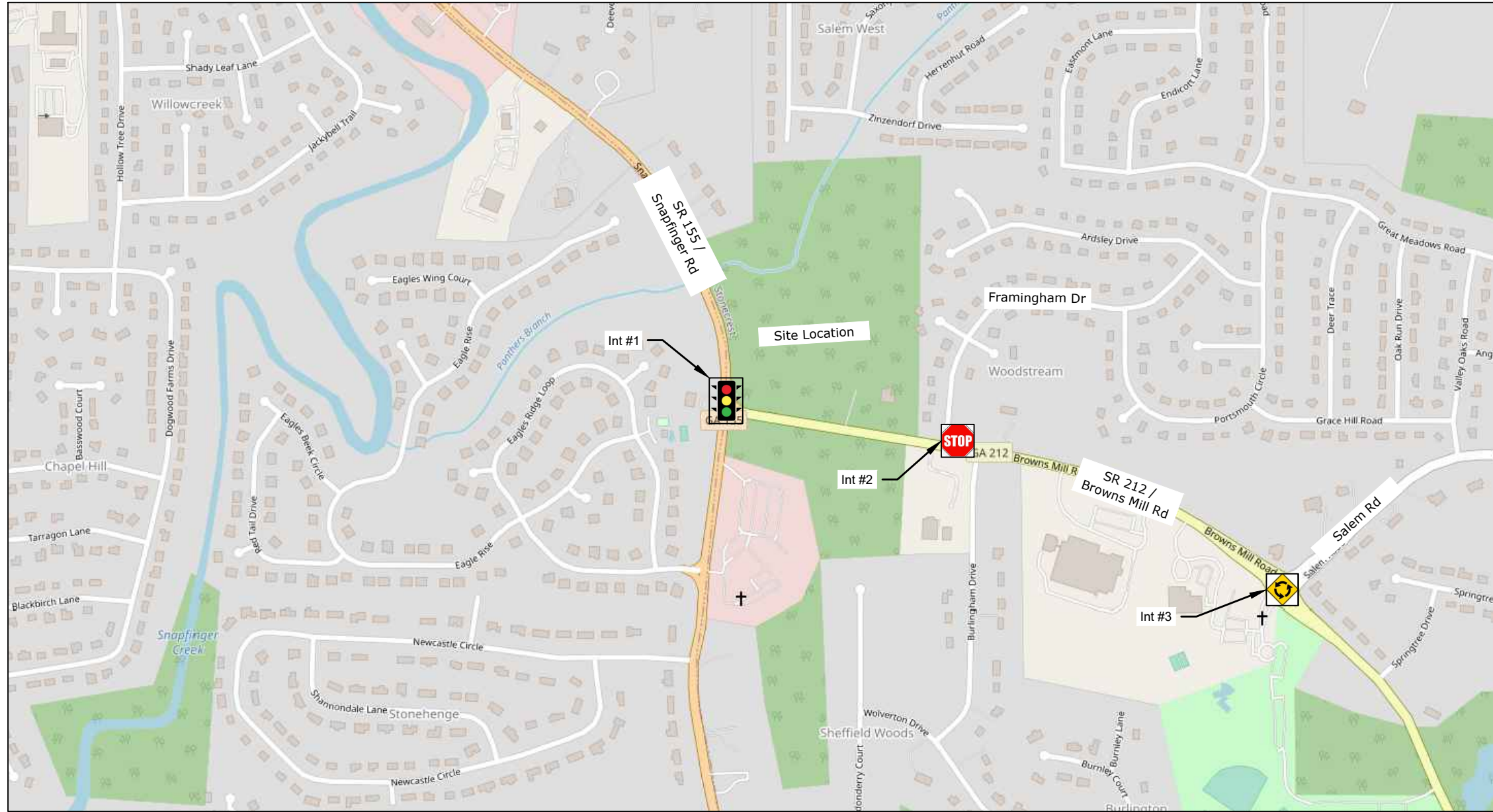
FUTURE CONDITIONS – WITHOUT THE PROPOSED DEVELOPMENT (NO - BUILD)

The impact of the proposed development on the roadway network was analyzed and evaluated in the future year (2026) without the proposed development (No-Build) to compare the future conditions with the proposed fully constructed development (Build).

Future No - Build Traffic Volumes

The future background traffic volumes (2026) were calculated by applying the annual exponential growth rate over three years to the existing background traffic volumes (2023). Future background traffic volumes are shown in **Figure 4**.





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FIGURE 4



NO-BUILD (2024)
PEAK HOUR
VOLUMES

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Future No - Build Level of Service

The future 2026 background traffic volumes were used to analyze the future no-build level of service for the study intersections. The same LOS methodology discussed previously was applied to the 2026 background traffic to determine operations at the study intersection. **Table 8** summarizes the results of the intersection capacity analysis for the future no-build year.

The intersection at SR 155 / Snapfinger Road operates at an overall unacceptable level of service in the AM peak hour, and the northbound approach also drops to LOS E. Detailed Synchro and RAB Tool reports are attached in **Appendix D**.

Intersection	Control Type	Approach	Delay (LOS)	
			AM	PM
SR 155 / Snapfinger Road at SR 212 / Browns Mill Road	Signalized	WB	73 (E)	58 (E)
		NB	76 (E)	44 (D)
		SB	48 (D)	27 (C)
		Overall	66 (E)	32 (C)
SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive	Minor-Street Stop-Control	NB	>300 (F)	102 (F)
		SB	46 (E)	17 (C)
SR 212 / Browns Mill Road at Salem Road	Multilane Roundabout	EB	4 (A)	6 (A)
		WB	7 (A)	5 (A)
		NB	4 (A)	6 (A)
		SB	13 (B)	5 (A)
		Overall	8 (A)	5 (A)

PROPOSED DEVELOPMENT

The Browns Mill Road Subdivision development will include 46 single-family housing units and one new driveway along SR 212 / Browns Mill Road. The build-out of the development is planned for 2026.

Trip Generation

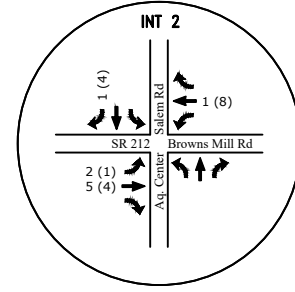
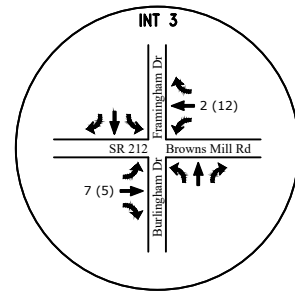
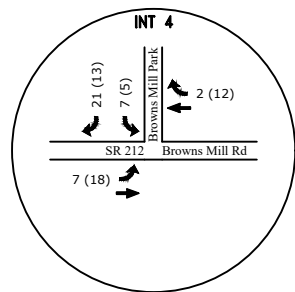
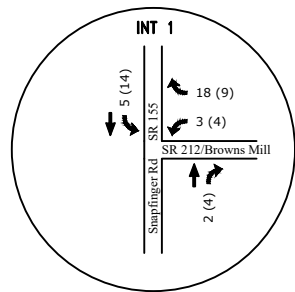
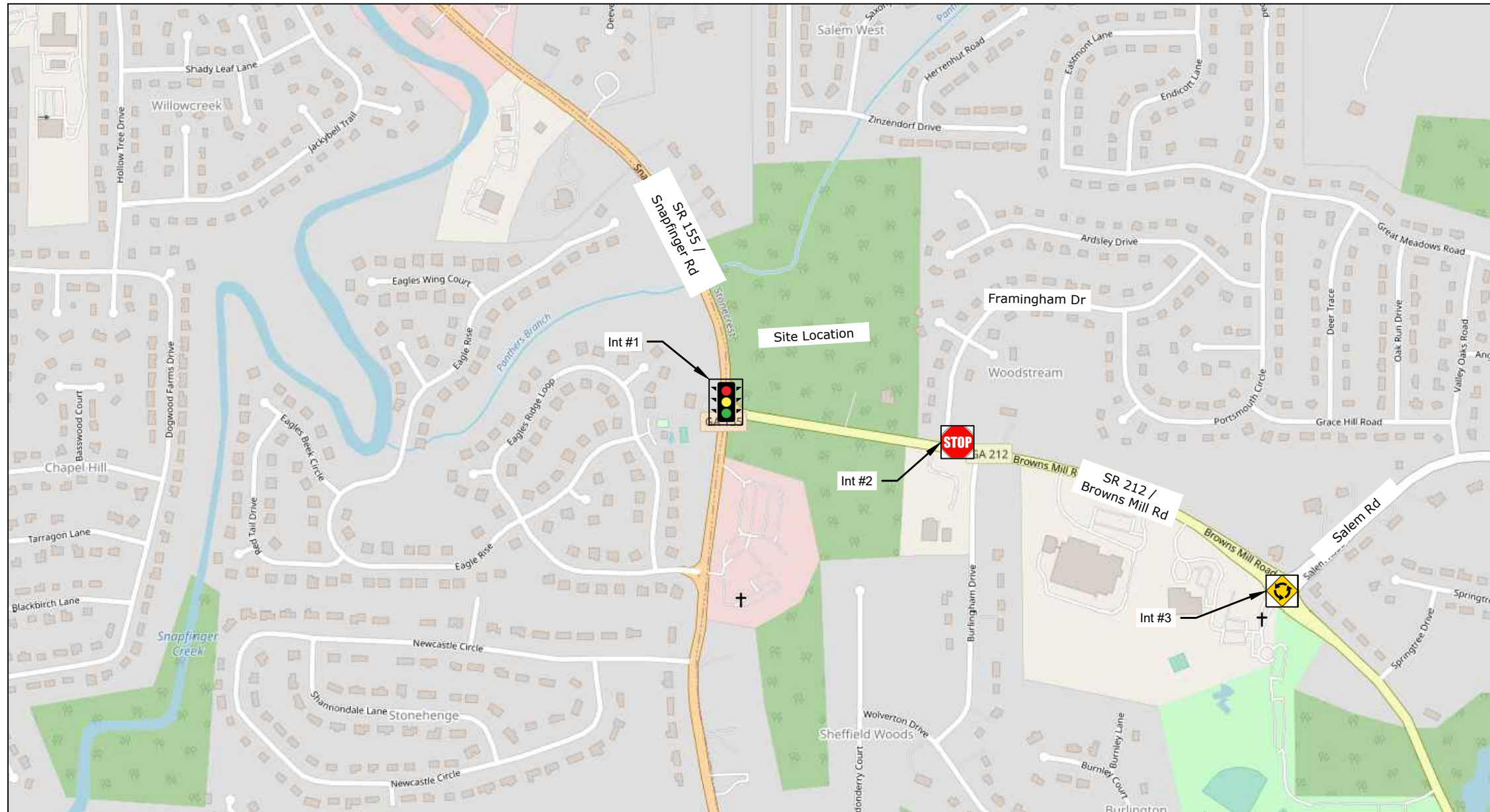
The number of trips expected to be generated from the development were estimated based on the method defined in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition. Due to land use of the development no pass-by or internal capture trip reductions were applied. The trip generation for the proposed development is summarized in **Table 9**. The trip generation report is attached in **Appendix E**.

Land Use (ITE Code)	Unit of Measure	Daily Traffic			AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
Single-Family Housing (220)	46 Housing Units	247	247	494	9	28	37	30	18	48

Trip Distribution and Assignment

The trips expected to be generated from the proposed development were distributed on the roadway network in the study area. The proposed distribution is based on historical counts and observed traffic patterns in the area. The count data collected at Framingham Drive / Burlingham Drive was used to determine the directionality of the generated trips, as those roadways serve similar land uses. Generated trips assigned to the adjacent street network are shown in **Figure 5**.

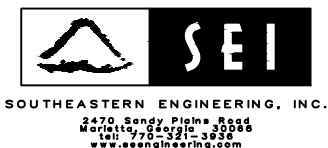




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FIGURE 5



SITE-GENERATED TRIP DISTRIBUTION

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Auxiliary Lane Analysis

The need for auxiliary lanes on SR 212 / Browns Mill Road were evaluated at the new driveway, Browns Mill Park, based on the guidelines from GDOT’s *Regulations for Driveway and Encroachment Control*. Auxiliary lanes are used on approaches to intersections when the projected turning traffic volumes exceed minimum levels. Based on the GDOT manual a left-turn lane is recommended at an intersection if the threshold values as shown in **Table 10** are met or exceeded.

Table 10: Left-Turn Lane Requirements				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	< 6,000	≥ 6,000	< 10,000	≥ 10,000
35 MPH or Less	300 LTV a day	200 LTV a day	400 LTV a day	300 LTV a day
40 to 50 MPH	250 LTV a day	175 LTV a day	325 LTV a day	250 LTV a day
≥ 55 MPH	200 LTV a day	150 LTV a day	250 LTV a day	200 LTV a day

Based on the GDOT manual a left-turn lane is recommended at an intersection if the threshold values as shown in **Table 11** are met or exceeded.

Table 11: Right-Turn Lane Requirements				
Posted Speed	2 Lane Routes		More than 2 Lanes on Main Road	
	ADT		ADT	
	< 6,000	≥6,000	<10,000	≥10,000
35 MPH or Less	200 RTV a day	100 RTV a day	200 RTV a day	100 RTV a day
40 to 50 MPH	150 RTV a day	75 RTV a day	150 RTV a day	75 RTV a day
55 to 60 MPH	100 RTV a day	50 RTV a day	100 RTV a day	50 RTV a day
≥65 MPH	Always	Always	Always	Always

SR 212 / Browns Mill Road is a two-lane route, with an average daily traffic volume of approximately 19,615 vehicles per day (vpd) and has a posted speed limit of 45 miles per hour. Based on these characteristics the threshold for a left turn lane is set at 175 LTV per day and a right-turn lane is set at 75 RTV per day.

Based on the expected trip distribution, approximately 250 vpd will enter the site at Browns Mill Park, with 155 vpd making a left-turn and 95 vpd will making a right-turn into the site daily. Per the daily turning movement volumes, a right-turn lane is recommended at the study intersection, and it will be included in the build scenario analysis.

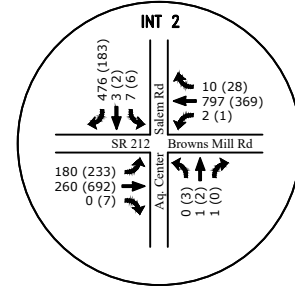
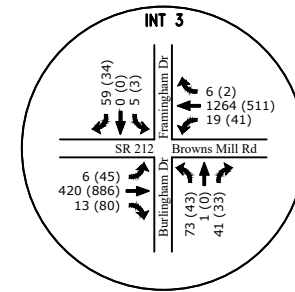
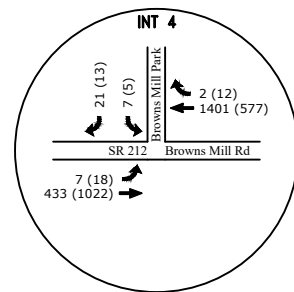
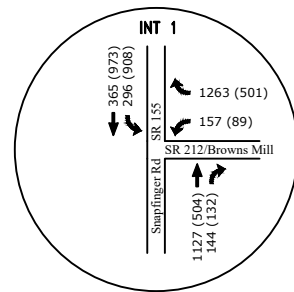
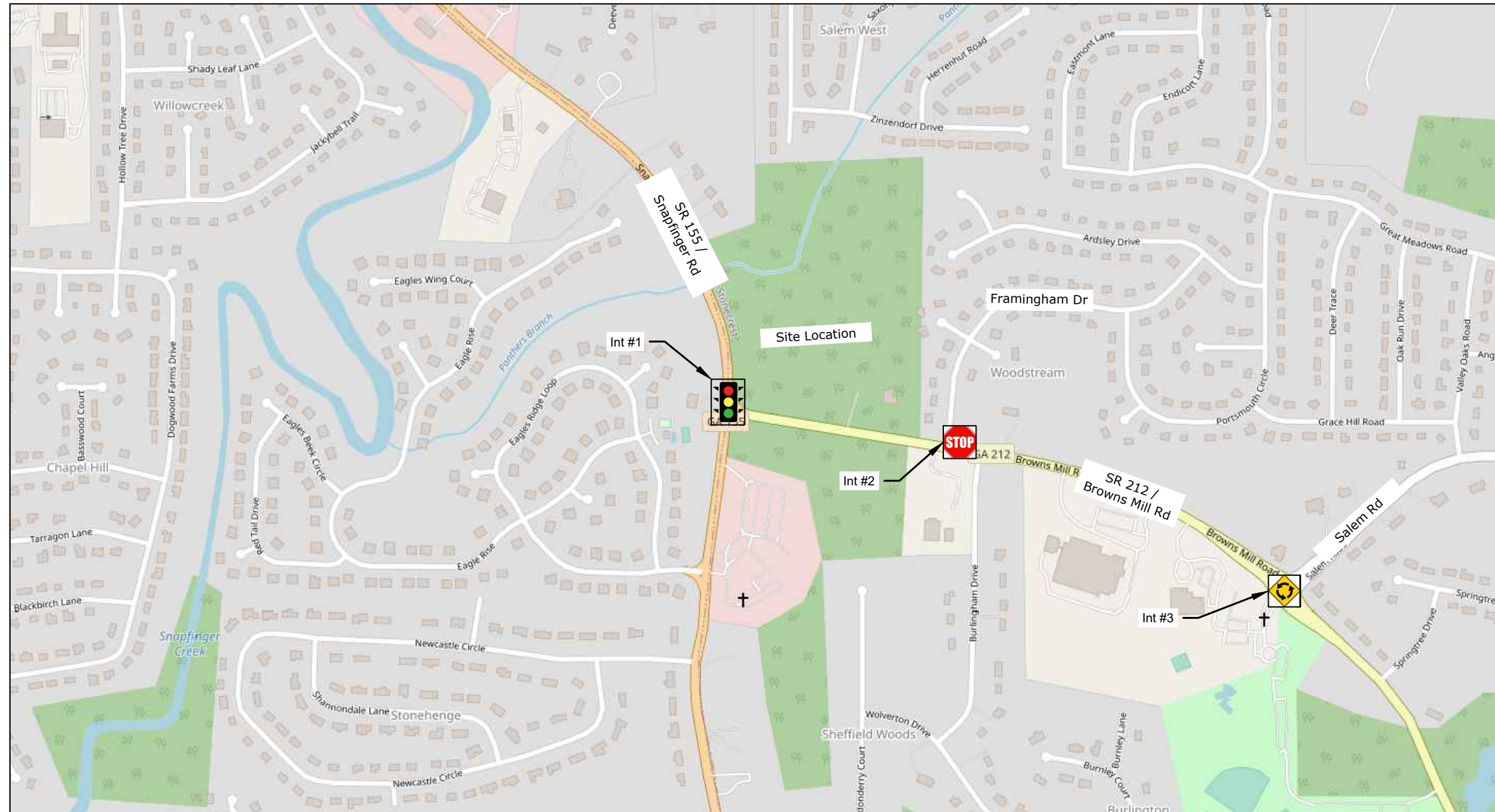
FUTURE CONDITIONS- WITH THE PROPOSED DEVELOPMENT (BUILD)

To assess the traffic impact of the development, the site-generated trips were added to the future background traffic, and the combined volumes were analyzed.

Future Build Traffic Volumes

This future build analysis was conducted to determine any impacts to the study intersections resulting from traffic from the full build-out of the proposed development. The site-generated trips assigned to the adjacent roadway network were added to the background traffic volumes and are presented in **Figure 6**.





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FIGURE 6



BUILD (2024) PEAK HOUR VOLUMES

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Intersection Control Evaluation

GDOT policy 4A-5 states an intersection control evaluation (ICE) is required for any intersection improvement or for a new intersection on State Route. So, ICE was performed on the Browns Mill Park driveway intersection as it will be a new intersection on a state route. The ICE process compares and scores the feasible intersection controls based on project cost, safety analysis, traffic operations, environmental impacts, and stakeholder posture. The higher the ICE score, the preferable the intersection control per the GDOT ICE tool.

Based on ICE Stage 1, a minor-street stop-control with a right-turn lane on SR 212 / Browns Mill Road and a channelized right-turn on the new driveway was identified as the only feasible control method. The alternative and its delay are shown in **Table 12**. Since only one alternative was determined to be feasible, an ICE waiver will be submitted in lieu of ICE Stage 2 form. The ICE tool and associated operational analysis reports are attached in **Appendix F**.

Control Type	ICE Stage 2 Score (Rank)	Delay (LOS)	
		AM	PM
Minor-Street Stop-Control w/ Turn Lanes	-	27 (D)	17 (C)

Future Build Level of Service

The level of service criteria discussed in the prior sections was applied to the study intersections to determine the impacts of 2026 background traffic volumes plus total site-generated volumes. All study intersections were analyzed with the existing geometry and intersection controls. The development driveway was modelled as a full access stop sign controlled approach, with one entry and one exit lane, a channelized right-turn on the driveway, and a right-turn storage lane on SR 212 / Browns Mill Road. The results of the intersection capacity analysis for the future year with the development are summarized in **Table 13**. The development driveway is expected to operate at an acceptable level of service.

Intersection	Control Type	Approach	Delay (LOS)	
			AM	PM
SR 155 / Snapfinger Road at SR 212 / Browns Mill Road	Signalized	WB	73 (E)	58 (E)
		NB	77 (E)	44 (D)
		SB	51 (D)	30 (C)
		Overall	68 (E)	34 (C)
SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive	Minor-Street Stop-Control	NB	>300 (F)	107 (F)
		SB	47 (E)	17 (C)
SR 212 / Browns Mill Road at Salem Road	Multilane Roundabout	EB	4 (A)	6 (A)
		WB	7 (A)	5 (A)
		NB	4 (A)	6 (A)
		SB	13 (B)	5 (A)
		Overall	8 (A)	5 (A)
SR 212 / Browns Mill Road at Browns Mill Park	Minor-Street Stop-Control	SB	27 (D)	17 (C)



Level of Service Comparison

The Browns Mill Road Subdivision development has a nominal impact on the delay of the surrounding study network. The additional development traffic does not result in reduced levels of service for any of the adjacent intersections. The development driveway, Browns Mill Park, accessing SR 212 / Browns Mill Road is expected to operate at an acceptable level of service. Detailed Synchro and RAB Tool reports are attached in **Appendix D. Table 14** shows a comparison of the delays in all scenarios for the study intersections.

Table 14: LOS Comparison							
Intersection	Approach	Existing Delay		No-Build Delay		Build Delay	
		AM	PM	AM	PM	AM	PM
SR 155 / Snapfinger Road at SR 212 / Browns Mill Road	WB	70 (E)	59 (E)	73 (E)	58 (E)	73 (E)	58 (E)
	NB	54 (D)	31 (C)	76 (E)	44 (D)	77 (E)	44 (D)
	SB	40 (D)	19 (B)	48 (D)	27 (C)	51 (D)	30 (C)
	Overall	51 (D)	23 (C)	66 (E)	32 (C)	68 (E)	34 (C)
SR 212 / Browns Mill Road at Framingham Drive / Burlingham Drive	NB	>300 (F)	71 (F)	>300 (F)	102 (F)	>300 (F)	107 (F)
	SB	39 (E)	16 (C)	46 (E)	17 (C)	47 (E)	17 (C)
SR 212 / Browns Mill Road at Salem Road	EB	4 (A)	6 (A)	4 (A)	6 (A)	4 (A)	6 (A)
	WB	7 (A)	5 (A)	7 (A)	5 (A)	7 (A)	5 (A)
	NB	4 (A)	6 (A)	4 (A)	6 (A)	4 (A)	6 (A)
	SB	12 (B)	4 (A)	13 (B)	5 (A)	13 (B)	5 (A)
	Overall	7 (A)	5 (A)	8 (A)	5 (A)	8 (A)	5 (A)
SR 212 / Browns Mill Road at Browns Mill Park	SB					27 (D)	17 (C)



Conclusion and Recommendations

Browns Mill Road Subdivision is a proposed residential development to be built on approximately 25 acres of undeveloped land in Stonecrest, GA. The development will be on the northeast corner of the intersection of SR 155 / Snapfinger Road at SR 212 / Browns Mill Road. The development includes 46 single-family housing units and will have a single driveway accessing SR 212 / Browns Mill Road. The build-out of the development is planned for 2026. This study analyzed existing and future peak hour traffic operations and capacity analysis for the study intersections to determine if recommendations to the existing roadway network should be made to accommodate the new traffic and determine how the new driveways should be controlled.

In existing and no-build conditions, several of the approaches of the existing intersections on SR 212 / Browns Mill Road operate unacceptably. The signalized intersection of SR 155 / Snapfinger Road at SR 212 / Browns Mill Road operates at LOS E in the no-build scenario during the AM peak hour. Both Framingham Drive and Burlingham Drive operate unacceptably. The Browns Mill Road Subdivision development has a nominal impact on the delay of the surrounding study network. The additional development traffic does not result in reduced levels of service for any of the adjacent intersections.

The development driveway, Browns Mill Park, accessing SR 212 / Browns Mill Road is expected to operate at an acceptable level of service, upon completion of the development. The geometry and method of control for the access driveway intersection was determined utilizing GDOT's auxiliary lane requirements and ICE tool.

The following is the recommended configuration for the driveway intersection:

SR 212 / Browns Mill Road at Browns Mill Park

- Browns Mill Park should be two lanes, one entry and one exit lane.
- Browns Mill Park should be full access and stop sign controlled.
- Provide a westbound right-turn lane on SR 212 / Browns Mill Road
- Provide a channelized right-turn on Browns Mill Park.

No other roadway improvements are recommended for this development.



APPENDICES

- **Appendix A**
 - Site Plan
- **Appendix B**
 - Traffic Counts Summary Sheets
- **Appendix C**
 - Growth Rate Summary
- **Appendix D**
 - Synchro Reports
- **Appendix E**
 - Trip Generation Report
- **Appendix F**
 - ICE Analysis



Appendix A
Site Plan

Appendix B
Traffic Counts Summary Sheets

Turning Movement Counts

**SR 155 / Snapfinger Road at SR 212 / Browns Mill
Road**



[Click here for Map](#)

Peak Hour Turning Movement Count

Stonecrest, GA



www.marrtraffic.com



Tuesday, August 15, 2023	
Period	1600 - 1800
Peak Hour	1700 - 1800

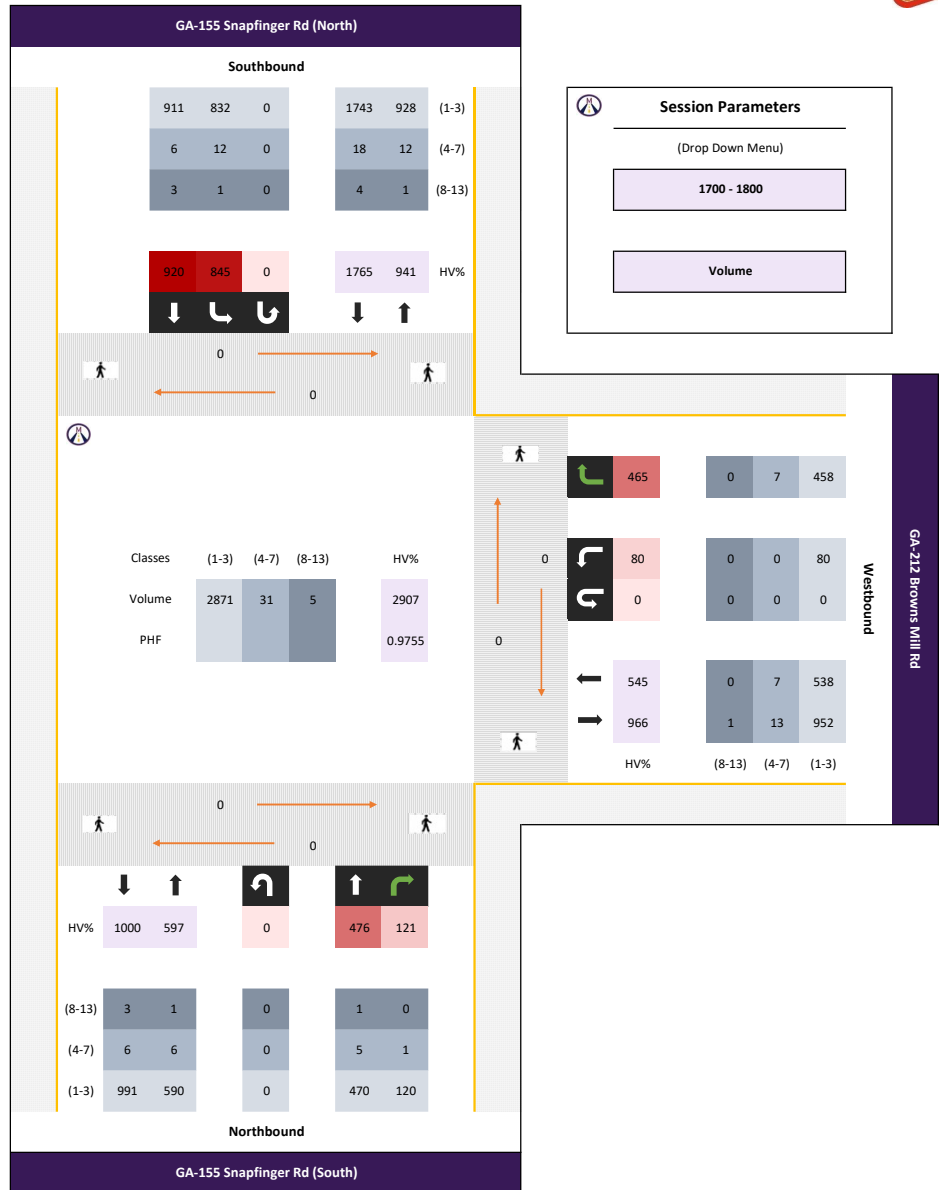
* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

1700 - 1800

Volume



Turning Movement Counts

**SR 212 / Browns Mill Road at Framingham Drive /
Burlingham Drive**



[Click here for Map](#)

Peak Hour Turning Movement Count

Stonecrest, GA



www.marrtraffic.com

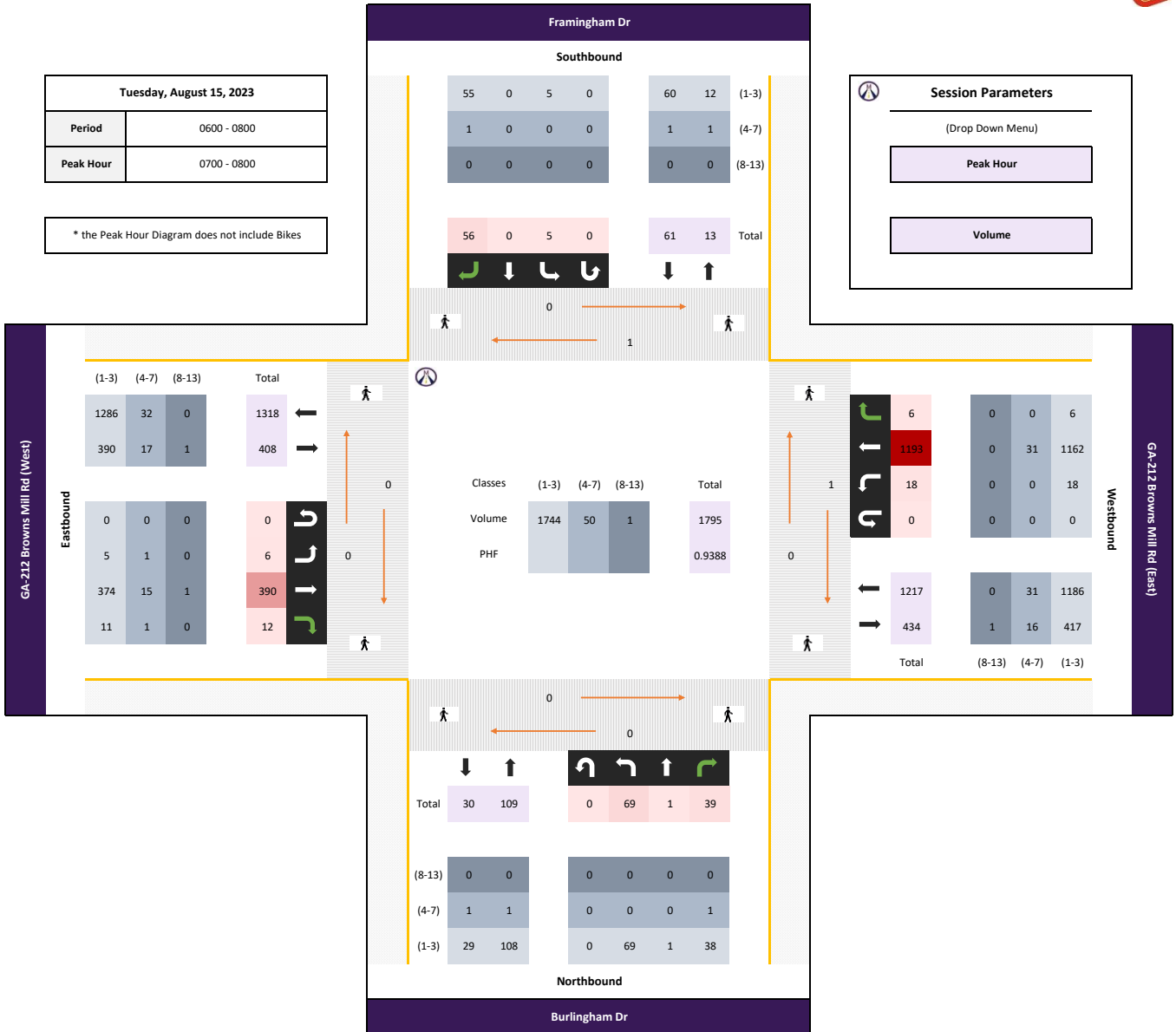


Tuesday, August 15, 2023	
Period	0600 - 0800
Peak Hour	0700 - 0800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)





[Click here for Map](#)

Peak Hour Turning Movement Count

Stonecrest, GA



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Tuesday, August 15, 2023	
Period	1600 - 1800
Peak Hour	1700 - 1800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



Turning Movement Counts
SR 212 / Browns Mill Road at Salem Road /
Aquatic Center Driveway



[Click here for Map](#)

Peak Hour Turning Movement Count

Stonecrest, GA



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Tuesday, August 15, 2023	
Period	0600 - 0800
Peak Hour	0700 - 0800

* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



All vehicles

Time	Northbound						Southbound					Eastbound					Westbound					Int Total		
	Driveway						Salem Rd					GA-212 Browns Mill Rd (West)					GA-212 Browns Mill Rd (East)							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total			
0700 - 0715	0	0	0	-	0	0	1	0	99	-	0	100	31	43	0	-	18	92	1	199	1	-	0	201
0715 - 0730	0	0	0	-	0	0	2	0	120	-	0	122	56	66	0	-	11	133	1	184	1	-	0	186
0730 - 0745	0	0	0	-	0	0	1	1	124	-	0	126	33	72	0	-	5	110	0	188	3	-	0	191
0745 - 0800	0	1	1	-	0	2	3	2	106	-	1	112	48	60	0	-	4	112	0	181	4	-	1	186
Total	0	1	1	0	0	2	7	3	449	0	1	460	168	241	0	0	38	447	2	752	9	0	1	764
Approach %	0.00	50.00	50.00	0.00	0.00	-	1.52	0.65	97.61	0.00	0.22	-	37.58	53.91	0.00	0.00	8.50	-	0.26	98.43	1.18	0.00	0.13	-
PHF	0.00	0.25	0.25	0.00	0.00	0.25	0.58	0.38	0.91	0.00	0.25	0.91	0.75	0.84	0.00	0.00	0.53	0.84	0.50	0.94	0.56	0.00	0.25	0.95

Passenger Vehicles (1-3)

Time	Northbound						Southbound					Eastbound					Westbound					Int Total		
	Driveway						Salem Rd					GA-212 Browns Mill Rd (West)					GA-212 Browns Mill Rd (East)							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total			
0700 - 0715	0	0	0	-	0	0	1	0	97	-	0	98	30	42	0	-	14	86	1	197	1	-	0	199
0715 - 0730	0	0	0	-	0	0	2	0	118	-	0	120	53	63	0	-	11	127	1	180	1	-	0	182
0730 - 0745	0	0	0	-	0	0	1	1	116	-	0	118	33	71	0	-	5	109	0	185	3	-	0	188
0745 - 0800	0	1	1	-	0	2	3	2	103	-	0	108	47	57	0	-	4	108	0	178	4	-	1	183
Total	0	1	1	0	0	2	7	3	434	0	0	444	163	233	0	0	34	430	2	740	9	0	1	752
Approach %	0.00	50.00	50.00	0.00	0.00	-	1.58	0.68	97.75	0.00	0.00	-	37.91	54.19	0.00	0.00	7.91	-	0.27	98.40	1.20	0.00	0.13	-
PHF	0.00	0.25	0.25	0.00	0.00	0.25	0.58	0.38	0.92	0.00	0.00	0.93	0.77	0.82	0.00	0.00	0.61	0.85	0.50	0.94	0.56	0.00	0.25	0.94

Single Unit Trucks (4-7)

Time	Northbound						Southbound					Eastbound					Westbound					Int Total		
	Driveway						Salem Rd					GA-212 Browns Mill Rd (West)					GA-212 Browns Mill Rd (East)							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total			
0700 - 0715	0	0	0	-	0	0	0	0	2	-	0	2	1	1	0	-	4	6	0	2	0	-	0	2
0715 - 0730	0	0	0	-	0	0	0	0	2	-	0	2	3	2	0	-	0	5	0	4	0	-	0	4
0730 - 0745	0	0	0	-	0	0	0	0	8	-	0	8	0	1	0	-	0	1	0	3	0	-	0	3
0745 - 0800	0	0	0	-	0	0	0	0	3	-	1	4	1	3	0	-	0	4	0	3	0	-	0	3
Total	0	0	0	0	0	0	0	0	15	0	1	16	5	7	0	0	4	16	0	12	0	0	0	12
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	93.75	0.00	6.25	-	31.25	43.75	0.00	0.00	25.00	-	0.00	100.00	0.00	0.00	0.00	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.47	0.00	0.25	0.50	0.42	0.58	0.00	0.00	0.25	0.67	0.00	0.75	0.00	0.00	0.00	0.75

Combination Trucks (8-13)

Time	Northbound						Southbound					Eastbound					Westbound					Int Total		
	Driveway						Salem Rd					GA-212 Browns Mill Rd (West)					GA-212 Browns Mill Rd (East)							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total			
0700 - 0715	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
0715 - 0730	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	0	1	0	0	0	-	0	0
0730 - 0745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
0745 - 0800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	100.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Bikes

Time	Northbound						Southbound					Eastbound					Westbound					Int Total		
	Driveway						Salem Rd					GA-212 Browns Mill Rd (West)					GA-212 Browns Mill Rd (East)							
	Left 3.1	Thru 3.2	Right 3.3	U-Turn 3.4	App Total		Left 3.5	Thru 3.6	Right 3.7	U-Turn 3.8	App Total	Left 3.9	Thru 3.10	Right 3.11	U-Turn 3.12	App Total	Left 3.13	Thru 3.14	Right 3.15	U-Turn 3.16	App Total			
0700 - 0715	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
0715 - 0730	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
0730 - 0745	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
0745 - 0800	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Approach %	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-	0.00	0.00	0.00	0.00	0.00	-
PHF	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00



[Click here for Map](#)

Peak Hour Turning Movement Count

Stonecrest, GA



www.marrtraffic.com



Tuesday, August 15, 2023	
Period	1600 - 1800
Peak Hour	1700 - 1800

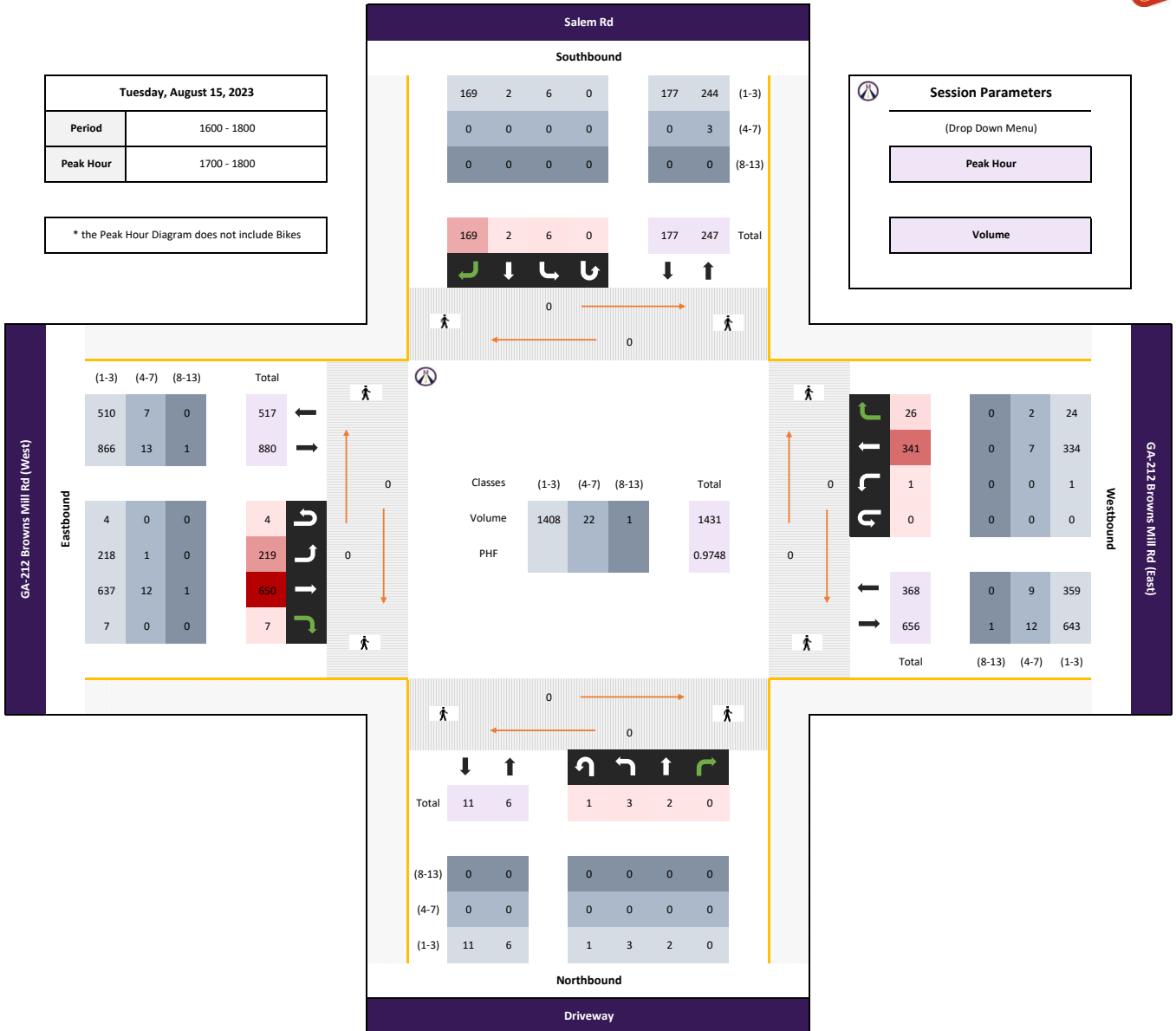
* the Peak Hour Diagram does not include Bikes

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



24-Hour Classification Count
SR 212 / Browns Mill Road east of SR 155 /
Snapfinger Road

Bi-Directional Class Count || NB EB 15min

Stonecrest, GA



www.marrtraffic.com

Site 1
GA-212 Browns Mill Rd,
east of GA-155 Snapfinger Rd

Date
Tuesday, August 15, 2023

Weather
Mostly Cloudy
80°F

Lat/Long
33.679013°, -84.193947°

[Click here for Map](#)

0000 - 2400 (Weekday 24h Session) (08-15-2023)
NB EB 15min

Time	Eastbound (Movement 1.1)													15min Total	60min Total
	1	2	3	4	5	6	7	8	9	10	11	12	13		
0000-0015	0	38	6	0	0	0	0	0	0	0	0	0	0	44	
0015-0030	0	36	4	0	0	0	0	0	0	0	0	0	0	40	
0030-0045	0	38	1	0	0	0	0	0	0	0	0	0	0	39	
0045-0100	0	34	6	0	0	0	0	0	0	0	0	0	0	40	163
0100-0115	0	35	5	0	0	0	0	0	0	0	0	0	0	40	
0115-0130	0	41	6	0	0	0	0	0	0	0	0	0	0	47	
0130-0145	0	20	2	0	0	0	0	0	0	0	0	0	0	22	
0145-0200	0	21	2	0	0	0	0	0	0	0	0	0	0	23	132
0200-0215	0	13	2	0	1	0	0	0	0	0	0	0	0	16	
0215-0230	0	20	1	0	1	0	0	0	0	0	0	1	0	22	
0230-0245	0	15	1	0	0	0	0	0	0	0	0	0	0	16	
0245-0300	0	12	1	0	0	0	0	0	0	0	0	0	0	13	67
0300-0315	0	6	1	0	0	0	0	0	0	0	0	0	0	7	
0315-0330	0	7	1	0	0	0	0	0	0	0	0	0	0	8	
0330-0345	0	8	1	0	0	0	0	0	0	0	0	0	0	9	
0345-0400	0	7	0	0	0	0	0	0	0	0	0	0	0	7	31
0400-0415	0	3	0	0	0	0	0	0	0	0	0	0	0	3	
0415-0430	0	7	0	0	1	0	0	0	0	0	0	0	0	8	
0430-0445	0	14	2	0	0	0	0	0	1	0	0	0	0	17	
0445-0500	0	15	1	0	1	0	0	0	0	0	0	0	0	17	45
0500-0515	0	7	1	1	0	0	0	0	0	0	0	0	0	9	
0515-0530	0	12	1	2	0	1	0	1	0	0	0	0	0	17	
0530-0545	0	13	1	3	0	0	0	0	0	0	0	0	0	17	
0545-0600	0	19	2	4	0	1	0	0	0	0	0	0	0	26	69
0600-0615	0	15	1	4	1	0	0	0	0	0	0	0	0	21	
0615-0630	0	33	7	3	1	4	0	0	0	0	0	0	0	44	
0630-0645	0	38	3	2	0	0	0	0	1	0	0	0	0	44	
0645-0700	0	46	6	2	0	0	0	0	0	0	0	0	0	54	163
0700-0715	0	70	12	3	0	0	0	0	0	0	0	0	0	85	
0715-0730	1	98	11	2	2	1	0	1	0	0	0	0	0	116	
0730-0745	0	94	8	2	1	1	0	0	0	0	0	0	0	106	
0745-0800	0	81	16	5	0	0	0	0	0	0	0	0	0	102	409
0800-0815	0	96	20	1	0	1	0	0	0	0	0	0	0	118	
0815-0830	0	75	18	4	0	0	0	0	0	0	0	0	0	97	
0830-0845	0	83	12	0	0	0	0	0	0	0	0	0	0	97	
0845-0900	0	52	15	0	3	0	0	0	1	0	0	0	0	71	383
0900-0915	1	55	18	1	3	0	0	0	0	0	0	0	0	78	
0915-0930	0	50	23	1	0	0	0	0	0	0	0	0	0	74	
0930-0945	0	51	9	0	6	1	0	1	0	0	0	0	0	68	
0945-1000	1	59	23	0	3	0	0	2	0	0	0	0	0	88	308
1000-1015	0	65	12	0	1	0	0	0	0	0	0	0	0	78	
1015-1030	0	49	13	0	0	2	0	0	0	0	0	0	0	64	
1030-1045	0	44	13	1	3	1	0	0	1	0	0	0	0	62	
1045-1100	0	48	19	0	0	1	0	0	1	0	0	0	0	70	274
1100-1115	0	66	17	1	0	0	0	0	0	0	0	0	0	84	
1115-1130	0	60	14	1	3	0	0	1	0	0	0	0	0	79	
1130-1145	0	57	14	1	1	1	0	0	1	0	0	0	0	75	
1145-1200	0	54	11	0	1	1	0	0	0	0	0	0	0	67	305
1200-1215	0	64	12	1	1	0	0	1	0	0	0	0	0	79	
1215-1230	0	62	21	2	2	0	0	2	0	0	0	0	0	89	
1230-1245	0	69	14	0	5	2	1	0	0	0	0	0	0	91	
1245-1300	1	69	15	3	1	0	0	1	0	0	0	0	0	90	349
1300-1315	0	76	15	1	0	0	0	1	0	0	0	0	0	93	
1315-1330	0	67	16	2	1	1	0	1	0	0	0	0	0	88	
1330-1345	0	80	15	4	1	0	0	1	0	0	0	0	0	101	
1345-1400	2	100	13	9	5	0	0	0	0	0	0	0	0	129	411
1400-1415	0	94	11	3	0	1	0	0	0	0	0	0	0	109	
1415-1430	0	123	20	1	1	0	0	1	0	0	0	0	0	146	
1430-1445	0	124	19	1	2	0	0	1	0	0	0	0	0	147	
1445-1500	0	106	24	2	0	1	0	0	0	0	0	0	0	133	535
1500-1515	0	116	26	7	3	0	0	1	0	0	0	0	0	153	
1515-1530	0	132	29	4	3	0	0	0	0	0	0	0	0	168	
1530-1545	0	159	16	7	1	0	0	0	0	0	0	0	0	183	
1545-1600	0	175	38	2	1	0	0	1	1	0	0	0	0	218	722
1600-1615	3	200	29	1	2	3	0	0	1	0	0	0	0	239	
1615-1630	1	164	29	3	3	0	0	0	0	0	0	0	0	200	
1630-1645	0	170	30	1	1	0	0	0	1	0	0	0	0	203	
1645-1700	0	185	26	0	2	0	0	0	0	0	0	0	0	213	855
1700-1715	0	201	41	1	2	0	0	0	0	0	0	0	0	245	
1715-1730	0	216	27	2	1	1	0	1	0	0	0	0	0	248	
1730-1745	1	214	25	0	1	0	0	0	0	0	0	0	0	241	
1745-1800	0	196	32	0	2	3	0	0	0	0	0	0	0	233	967
1800-1815	0	186	28	0	0	0	0	0	0	0	0	0	0	214	
1815-1830	0	191	29	0	0	0	0	0	0	0	0	0	0	220	
1830-1845	0	175	18	0	0	0	0	0	1	0	0	0	0	194	
1845-1900	0	136	9	0	0	0	0	0	0	0	0	0	0	145	773
1900-1915	0	112	10	0	1	0	0	0	0	0	0	0	0	123	
1915-1930	0	130	6	0	0	0	0	0	0	0	0	0	0	136	
1930-1945	0	132	17	0	2	0	0	0	0	0	0	0	0	151	
1945-2000	0	94	16	0	1	0	0	0	1	0	0	0	0	112	522
2000-2015	0	108	8	0	0	0	0	0	0	0	0	0	0	116	
2015-2030	1	89	19	0	1	0	0	0	0	0	0	0	0	110	
2030-2045	0	122	10	0	2	0	0	0	0	0	0	0	0	134	
2045-2100	0	101	11	0	0	0	0	0	0	0	0	0	0	112	472
2100-2115	0	93	6	0	0	0	0	0	0	0	0	0	0	99	
2115-2130	0	73	7	0	0	0	0	0	0	0	0	0	0	80	
2130-2145	0	71	5	0	2	0	0	0	0	0	0	0	0	78	
2145-2200	0	69	6	0	0	0	0	0	0	0	0	0	0	75	332
2200-2215	0	56	5	0	0	2	0	0	0	0	0	0	0	63	
2215-2230	0	44	11	0	0	0	0	0	0	0	0	0	0	55	
2230-2245	0	49	9	0	0	0	0	0	0	0	0	0	0	58	
2245-2300	0	34	5	0	0	0	0	0	0	0	0	0	0	39	215
2300-2315	0	39	5	0	0	0	0	0	0	0	0	0	0	44	
2315-2330	0	36	7	0	0	0	0	0	0	0	0	0	0	43	
2330-2345	0	35	6	0	0	0	0	0	0	0	0	0	0	41	
2345-0000	0	40	3	0	1	0	0	0	0	0	0	0	0	44	172

Session Total	12	7257	1162	101	86	26	0	20	10	0	0	0	0	0	8674
Session Average	0.13	75.59	12.10	1.05	0.90	0.27	0.00	0.21	0.10	0.00	0.00	0.00	0.00	0.00	90.35
Session Percentage	0.14	83.66	13.40	1.16	0.99	0.30	0.00	0.23	0.12	0.00	0.00	0.00	0.00	0.00	
AM Peak Hour	0900 - 1000	0715 - 0815	0900 - 1000	0530 - 0630	0845 - 0945	0715 - 0815	-	0900 - 1000	0545 - 0645	-	-	-	-	-	0715 - 0815
AM Peak Volume	2	369	73	14	12	3	0	3	1	0	0	0	0	0	442
Noon Peak Hour	1300 - 1400	1445 - 1545	1430 - 1530	1445 - 1545	1145 - 1245	1000 - 1100	-	1200 - 1300	1000 - 1100	-	-	-			

Bi-Directional Class Count || SB WB 15min

Stonecrest, GA



Site 1
GA-212 Browns Mill Rd,
east of GA-155 Snapfinger Rd

Date
Tuesday, August 15, 2023

Weather
Mostly Cloudy
80°F

Lat/Long
33.679013°, -84.193947°

[Click here for Map](#)

0000 - 2400 (Weekday 24h Session) (08-15-2023)
SB WB 15min

Time	Westbound (Movement 1,2)													15min Total	60min Total
	1	2	3	4	5	6	7	8	9	10	11	12	13		
0000-0015	0	13	1	0	0	0	0	0	0	0	0	0	0	14	
0015-0030	0	10	2	0	0	0	0	0	0	0	0	0	0	12	
0030-0045	0	7	2	0	0	0	0	0	0	0	0	0	0	9	
0045-0100	0	9	1	0	0	0	0	0	0	0	0	0	0	10	45
0100-0115	0	16	1	0	0	0	0	0	0	0	0	0	0	17	
0115-0130	0	7	0	0	0	0	0	0	0	0	0	0	0	7	
0130-0145	0	13	2	0	0	0	0	0	0	0	0	0	0	15	
0145-0200	0	8	0	0	0	0	0	0	0	0	0	0	0	8	47
0200-0215	0	11	1	0	0	0	0	0	0	0	0	0	0	12	
0215-0230	0	6	1	0	0	0	0	0	0	0	0	0	0	7	
0230-0245	0	11	2	0	0	0	0	0	0	0	0	0	0	13	
0245-0300	0	6	0	0	0	0	0	0	0	0	0	0	0	6	38
0300-0315	0	13	2	0	0	0	0	0	0	0	0	0	0	15	
0315-0330	0	13	1	0	0	0	0	0	0	0	0	0	0	14	
0330-0345	0	17	1	0	0	0	0	0	1	0	0	0	0	19	
0345-0400	0	12	3	0	1	1	0	0	0	0	0	0	0	17	65
0400-0415	0	19	8	0	0	0	0	0	0	0	0	0	0	27	
0415-0430	0	31	8	0	0	0	0	0	0	0	0	0	0	39	
0430-0445	0	40	7	1	0	0	0	0	0	0	0	0	0	48	
0445-0500	0	48	8	1	0	0	0	0	0	0	0	0	0	57	171
0500-0515	0	53	15	0	1	0	0	0	1	0	0	0	0	70	
0515-0530	0	71	21	0	0	1	0	0	0	0	0	0	0	93	
0530-0545	0	101	22	0	0	1	0	0	0	0	0	0	0	124	
0545-0600	0	112	18	0	0	0	0	0	0	0	0	0	0	130	417
0600-0615	0	182	25	0	2	0	0	0	0	0	0	0	0	209	
0615-0630	0	224	32	1	3	0	0	0	0	0	0	0	0	260	
0630-0645	0	279	40	0	2	3	0	0	0	0	0	0	0	324	
0645-0700	2	281	38	2	1	0	0	0	0	0	0	0	0	324	1117
0700-0715	0	291	27	6	0	1	0	0	0	0	0	0	0	325	
0715-0730	0	302	34	5	0	2	0	0	0	0	0	0	0	343	
0730-0745	0	279	46	10	1	1	0	0	0	0	0	0	0	337	
0745-0800	0	268	41	3	3	0	0	0	0	0	0	0	0	315	1320
0800-0815	0	250	38	3	2	0	0	0	0	0	0	0	0	293	
0815-0830	0	228	42	10	2	0	0	0	0	0	0	0	0	282	
0830-0845	0	221	32	16	1	1	0	2	0	0	0	0	0	273	
0845-0900	0	173	34	0	2	2	0	0	0	0	0	0	0	211	1059
0900-0915	0	158	29	0	0	0	0	0	2	0	0	0	0	189	
0915-0930	0	175	33	1	2	0	0	0	1	0	0	0	0	212	
0930-0945	0	109	28	1	2	0	0	0	0	0	0	0	0	140	
0945-1000	0	124	27	1	2	0	0	0	0	0	0	0	0	154	695
1000-1015	1	114	32	0	1	0	0	0	0	0	0	0	0	148	
1015-1030	0	119	19	0	2	0	0	0	0	0	0	0	0	140	
1030-1045	0	116	17	0	3	0	0	0	0	0	0	0	0	136	
1045-1100	0	104	19	0	1	2	0	0	0	0	0	0	0	126	550
1100-1115	0	101	21	0	1	0	0	0	0	0	0	0	0	123	
1115-1130	0	69	27	0	0	1	0	0	0	0	0	0	0	97	
1130-1145	0	85	23	1	0	1	0	1	0	0	0	0	0	111	
1145-1200	0	90	14	1	0	0	0	0	0	0	0	0	0	105	436
1200-1215	0	88	19	3	1	2	0	1	0	0	0	0	0	114	
1215-1230	0	92	24	0	0	3	0	5	0	0	0	0	0	124	
1230-1245	0	85	14	0	2	0	0	0	0	0	0	0	0	101	
1245-1300	0	94	15	0	2	0	0	0	0	0	0	0	0	111	450
1300-1315	0	95	20	0	2	1	0	0	0	0	0	0	0	118	
1315-1330	1	116	22	0	0	0	0	0	0	0	0	0	0	139	
1330-1345	0	94	16	1	5	0	0	0	0	0	0	0	0	116	
1345-1400	0	113	17	0	1	1	0	2	0	0	0	0	0	134	507
1400-1415	0	106	22	0	2	1	0	0	1	0	0	0	0	132	
1415-1430	0	94	18	4	1	0	0	0	0	0	0	0	0	117	
1430-1445	0	110	21	1	3	0	0	0	1	0	0	0	0	136	
1445-1500	0	109	22	3	6	0	0	0	0	1	0	0	0	141	
1500-1515	0	99	21	5	1	0	0	0	0	0	0	0	0	126	526
1515-1530	0	122	19	6	1	0	0	0	0	0	0	0	0	148	
1530-1545	0	133	16	6	1	0	0	1	0	0	0	0	0	157	
1545-1600	0	134	20	3	2	0	0	0	0	0	0	0	0	159	590
1600-1615	0	97	26	3	3	1	0	0	0	0	0	0	0	130	
1615-1630	0	127	22	4	1	0	0	0	0	0	0	0	0	154	
1630-1645	0	105	13	6	1	0	0	0	0	0	0	0	0	125	
1645-1700	2	120	19	7	0	0	0	0	0	0	0	0	0	148	557
1700-1715	0	105	24	0	2	0	0	0	0	0	0	0	0	131	
1715-1730	0	110	17	0	0	0	0	0	0	0	0	0	0	127	
1730-1745	0	118	20	1	3	0	0	0	0	0	0	0	0	142	
1745-1800	0	127	17	0	1	0	0	0	0	0	0	0	0	145	545
1800-1815	0	123	12	0	1	0	0	0	0	0	0	0	0	136	
1815-1830	0	123	16	0	0	1	0	0	0	0	0	0	0	140	
1830-1845	0	121	12	0	1	0	0	0	0	0	0	0	0	134	
1845-1900	0	107	19	0	3	0	0	0	0	0	0	0	0	129	539
1900-1915	0	112	11	0	1	0	0	0	0	0	0	0	0	124	
1915-1930	0	92	15	0	0	0	0	0	0	0	0	0	0	107	
1930-1945	0	79	10	0	0	0	0	0	1	0	0	0	0	90	
1945-2000	0	96	11	0	0	0	0	0	0	0	0	0	0	107	428
2000-2015	1	67	9	0	0	0	0	0	0	0	0	0	0	77	
2015-2030	0	76	9	0	2	0	0	0	0	0	0	0	0	87	
2030-2045	0	79	7	0	0	0	0	0	0	0	0	0	0	86	
2045-2100	0	85	9	0	0	1	0	0	0	0	0	0	0	95	345
2100-2115	0	71	9	1	0	0	0	0	0	0	0	0	0	81	
2115-2130	0	58	6	0	0	0	0	0	0	0	0	0	0	64	
2130-2145	0	44	2	0	0	0	0	0	0	0	0	0	0	46	
2145-2200	1	45	4	0	0	0	0	0	0	0	0	0	0	50	241
2200-2215	0	42	4	0	0	0	0	0	0	0	0	0	0	46	
2215-2230	0	40	5	0	0	0	0	0	0	0	0	0	0	45	
2230-2245	0	30	5	0	0	0	0	0	0	0	0	0	0	35	
2245-2300	0	29	5	0	1	0	0	0	0	0	0	0	0	35	161
2300-2315	0	23	2	0	1	0	0	0	0	0	0	0	0	25	
2315-2330	0	18	0	0	0	0	0	0	0	0	0	0	0	18	
2330-2345	0	20	1	0	0	0	0	0	0	0	0	0	0	21	
2345-0000	0	21	4	0	0	0	0	0	0	0	0	0	0	25	90

Session Total	8	9183	1496	117	86	28	0	12	9	0	0	0	0	10939
Session Average	0.08	95.66	15.58	1.22	0.90	0.29	0.00	0.13	0.09	0.00	0.00	0.00	0.00	113.95
Session Percentage	0.07	83.95	13.68	1.07	0.79	0.26	0.00	0.11	0.08	0.00	0.00	0.00	0.00	
AM Peak Hour	0600-0700	0630-0730	0730-0830	0745-0845	0600-0700	0630-0730	-	0745-0845	0830-0930	-	-	-	-	0645-0745
AM Peak Volume	2	1153	167	32	8	6	0	2	3	0	0	0	0	1329
Noon Peak Hour	1000-1100	1445-1545	1045-1145	1445-1545	1400-1500	1130-1230	-	1130-1230	1400-1500	-	-	-	-	1445-1545

Bi-Directional Class Count || Bi-Directional 15min

Stonecrest, GA



Site 1
GA-212 Browns Mill Rd,
east of GA-155 Snapfinger Rd

Date
Tuesday, August 15, 2023

Weather
Mostly Cloudy
80°F

Lat/Long
33.679013°, -84.193947°

0000 - 2400 (Weekday 24h Session) (08-15-2023)
Bi-Directional 15min

Time	Bi-Directional 15min													15min Total	60min Total
	1	2	3	4	5	6	7	8	9	10	11	12	13		
0000-0015	0	51	7	0	0	0	0	0	0	0	0	0	0	58	
0015-0030	0	46	6	0	0	0	0	0	0	0	0	0	0	52	
0030-0045	0	45	3	0	0	0	0	0	0	0	0	0	0	48	
0045-0100	0	43	7	0	0	0	0	0	0	0	0	0	0	50	208
0100-0115	0	51	6	0	0	0	0	0	0	0	0	0	0	57	
0115-0130	0	48	6	0	0	0	0	0	0	0	0	0	0	54	
0130-0145	0	33	4	0	0	0	0	0	0	0	0	0	0	37	
0145-0200	0	29	2	0	0	0	0	0	0	0	0	0	0	31	179
0200-0215	0	24	3	0	1	0	0	0	0	0	0	0	0	28	
0215-0230	0	26	2	0	1	0	0	0	0	0	0	0	0	29	
0230-0245	0	26	3	0	0	0	0	0	0	0	0	0	0	29	
0245-0300	0	18	1	0	0	0	0	0	0	0	0	0	0	19	105
0300-0315	0	19	3	0	0	0	0	0	0	0	0	0	0	22	
0315-0330	0	20	2	0	0	0	0	0	0	0	0	0	0	22	
0330-0345	0	25	2	0	0	0	0	0	1	0	0	0	0	28	
0345-0400	0	19	3	0	1	1	0	0	0	0	0	0	0	24	96
0400-0415	0	22	8	0	0	0	0	0	0	0	0	0	0	30	
0415-0430	0	38	8	1	0	0	0	0	0	0	0	0	0	47	
0430-0445	0	54	9	1	0	0	0	0	1	0	0	0	0	65	
0445-0500	0	63	9	1	1	0	0	0	0	0	0	0	0	74	216
0500-0515	0	60	16	1	1	0	0	0	1	0	0	0	0	79	
0515-0530	0	83	22	2	0	2	0	1	0	0	0	0	0	110	
0530-0545	0	114	23	3	0	1	0	0	0	0	0	0	0	141	
0545-0600	0	131	20	4	0	1	0	0	0	0	0	0	0	156	486
0600-0615	0	197	26	4	3	0	0	0	0	0	0	0	0	230	
0615-0630	0	257	39	4	4	0	0	0	1	0	0	0	0	304	
0630-0645	0	317	43	2	2	3	0	0	1	0	0	0	0	368	
0645-0700	2	327	44	4	1	0	0	0	0	0	0	0	0	378	1280
0700-0715	0	361	39	9	0	1	0	0	0	0	0	0	0	410	
0715-0730	1	400	45	7	2	3	0	1	0	0	0	0	0	459	
0730-0745	0	373	54	12	2	2	0	0	0	0	0	0	0	443	
0745-0800	0	349	57	8	3	0	0	0	0	0	0	0	0	417	1729
0800-0815	0	346	58	4	2	1	0	0	0	0	0	0	0	411	
0815-0830	0	303	60	14	2	0	0	0	0	0	0	0	0	379	
0830-0845	0	304	44	16	3	1	0	2	0	0	0	0	0	370	
0845-0900	0	225	49	0	5	2	0	0	1	0	0	0	0	282	1442
0900-0915	1	213	47	1	3	0	0	0	2	0	0	0	0	267	
0915-0930	0	225	56	2	2	0	0	0	1	0	0	0	0	286	
0930-0945	0	160	37	1	8	1	0	1	0	0	0	0	0	208	
0945-1000	1	183	50	1	5	0	0	2	0	0	0	0	0	242	1003
1000-1015	1	179	44	0	2	0	0	0	0	0	0	0	0	226	
1015-1030	0	168	32	0	2	2	0	0	0	0	0	0	0	204	
1030-1045	0	160	30	1	6	1	0	0	1	0	0	0	0	198	
1045-1100	0	152	38	0	1	3	0	1	1	0	0	0	0	196	824
1100-1115	0	167	38	1	1	0	0	0	0	0	0	0	0	207	
1115-1130	0	129	41	1	3	1	0	1	0	0	0	0	0	176	
1130-1145	0	142	37	2	1	2	0	2	0	0	0	0	0	186	
1145-1200	0	144	25	1	1	1	0	0	0	0	0	0	0	172	741
1200-1215	0	152	31	4	2	2	0	2	0	0	0	0	0	193	
1215-1230	0	154	45	2	2	3	0	7	0	0	0	0	0	213	
1230-1245	0	154	28	0	7	2	0	1	0	0	0	0	0	192	
1245-1300	1	163	30	3	3	0	0	1	0	0	0	0	0	201	799
1300-1315	0	171	35	1	2	1	0	1	0	0	0	0	0	211	
1315-1330	1	183	38	2	1	1	0	1	0	0	0	0	0	227	
1330-1345	0	174	31	5	6	0	0	1	0	0	0	0	0	217	
1345-1400	2	213	30	9	6	1	0	2	0	0	0	0	0	263	918
1400-1415	0	200	33	3	2	2	0	0	1	0	0	0	0	241	
1415-1430	0	217	38	5	2	0	0	1	0	0	0	0	0	263	
1430-1445	0	234	40	2	5	0	0	2	0	0	0	0	0	283	
1445-1500	0	215	46	5	6	1	0	0	1	0	0	0	0	274	1061
1500-1515	0	215	47	12	4	0	0	1	0	0	0	0	0	279	
1515-1530	0	254	48	10	4	0	0	0	0	0	0	0	0	316	
1530-1545	0	292	32	13	2	0	0	1	0	0	0	0	0	340	
1545-1600	0	309	58	5	3	0	0	1	1	0	0	0	0	377	1312
1600-1615	3	297	55	4	5	4	0	0	1	0	0	0	0	369	
1615-1630	1	291	51	7	4	0	0	0	0	0	0	0	0	354	
1630-1645	0	275	43	7	2	0	0	0	1	0	0	0	0	328	
1645-1700	2	305	45	7	2	0	0	0	7	0	0	0	0	361	1412
1700-1715	0	306	65	1	4	0	0	0	0	0	0	0	0	376	
1715-1730	0	326	44	2	1	1	0	1	0	0	0	0	0	375	
1730-1745	1	332	45	1	4	0	0	0	0	0	0	0	0	383	
1745-1800	0	323	49	0	3	3	0	0	0	0	0	0	0	378	1512
1800-1815	0	309	40	0	1	0	0	0	0	0	0	0	0	350	
1815-1830	0	314	45	0	0	1	0	0	0	0	0	0	0	360	
1830-1845	0	296	30	0	1	0	0	0	1	0	0	0	0	328	
1845-1900	0	243	28	0	3	0	0	0	0	0	0	0	0	274	1312
1900-1915	0	224	21	0	2	0	0	0	0	0	0	0	0	247	
1915-1930	0	222	21	0	0	0	0	0	0	0	0	0	0	243	
1930-1945	0	211	27	0	2	0	0	0	1	0	0	0	0	241	
1945-2000	0	190	27	0	1	0	0	0	1	0	0	0	0	219	950
2000-2015	1	175	17	0	0	0	0	0	0	0	0	0	0	193	
2015-2030	1	165	28	0	3	0	0	0	0	0	0	0	0	197	
2030-2045	0	201	17	0	2	0	0	0	0	0	0	0	0	220	
2045-2100	0	186	20	0	0	1	0	0	0	0	0	0	0	207	817
2100-2115	0	164	15	1	0	0	0	0	0	0	0	0	0	180	
2115-2130	0	131	13	0	0	0	0	0	0	0	0	0	0	144	
2130-2145	0	115	7	0	2	0	0	0	0	0	0	0	0	124	
2145-2200	1	114	10	0	0	0	0	0	0	0	0	0	0	125	573
2200-2215	0	98	9	0	0	2	0	0	0	0	0	0	0	109	
2215-2230	0	84	16	0	0	0	0	0	0	0	0	0	0	100	
2230-2245	0	79	14	0	0	0	0	0	0	0	0	0	0	93	
2245-2300	0	63	10	0	1	0	0	0	0	0	0	0	0	74	376
2300-2315	0	62	7	0	1	0	0	0	0	0	0	0	0	70	
2315-2330	0	54	7	0	0	0	0	0	0	0	0	0	0	61	
2330-2345	0	55	7	0	0	0	0	0	0	0	0	0	0	62	
2345-0000	0	61	7	0	1	0	0	0	0	0	0	0	0	69	262

Session Total	20	16440	2658	218	172	54	0	32	19	0	0	0	0	0	19613
Session Average	0.21	171.25	27.69	2.27	1.79	0.56	0.00	0.33	0.20	0.00	0.00	0.00	0.00	0.00	204.30
Session Percentage	0.10	83.82	13.55	1.11	0.88	0.28	0.00	0.16	0.10	0.00	0.00	0.00	0.00	0.00	
AM Peak Hour	0630-0730	0700-0800	0730-0830	0745-0845	0845-0945	0630-0730	-	0900-1000	0830-0930	-	-	-	-	-	0715-0815
AM Peak Volume	3	1483	229	42	18	7	0	3	4	0	0	0	0	0	1730
Noon Peak Hour	1300-1400	1445-1545	1430-1530	1445-1545	1430-1530	1130-1230	-	1130-123							

Bi-Directional Class Count || Volume Summary 15min



Stonecrest, GA

Site 1

GA-212 Browns Mill Rd,
east of GA-155 Snapfinger Rd

Date

Tuesday, August 15, 2023

Weather

Mostly Cloudy
80°F

Lat/Long

33.679013°, -84.193947°

0000 - 2400 (Weekday 24h Session) (08-15-2023)

Volume Summary 15min

TIME	Volume Summary 15min		15min Total	60min Total
	EB	WB		
0000 - 0015	44	14	58	
0015 - 0030	40	12	52	
0030 - 0045	39	9	48	
0045 - 0100	40	10	50	208
0100 - 0115	40	17	57	
0115 - 0130	47	7	54	
0130 - 0145	22	15	37	
0145 - 0200	23	8	31	179
0200 - 0215	16	12	28	
0215 - 0230	22	7	29	
0230 - 0245	16	13	29	
0245 - 0300	13	6	19	105
0300 - 0315	7	15	22	
0315 - 0330	8	14	22	
0330 - 0345	9	19	28	
0345 - 0400	7	17	24	96
0400 - 0415	3	27	30	
0415 - 0430	8	39	47	
0430 - 0445	17	48	65	
0445 - 0500	17	57	74	216
0500 - 0515	9	70	79	
0515 - 0530	17	93	110	
0530 - 0545	17	124	141	
0545 - 0600	26	130	156	486
0600 - 0615	21	209	230	
0615 - 0630	44	260	304	
0630 - 0645	44	324	368	
0645 - 0700	54	324	378	1280
0700 - 0715	85	325	410	
0715 - 0730	116	343	459	
0730 - 0745	106	337	443	
0745 - 0800	102	315	417	1729
0800 - 0815	118	293	411	
0815 - 0830	97	282	379	
0830 - 0845	97	273	370	
0845 - 0900	71	211	282	1442
0900 - 0915	78	189	267	
0915 - 0930	74	212	286	
0930 - 0945	68	140	208	
0945 - 1000	88	154	242	1003
1000 - 1015	78	148	226	
1015 - 1030	64	140	204	
1030 - 1045	62	136	198	
1045 - 1100	70	126	196	824
1100 - 1115	84	123	207	
1115 - 1130	79	97	176	
1130 - 1145	75	111	186	
1145 - 1200	67	105	172	741

Time	Volume Summary 15min		15min Total	60min Total
	EB	WB		
1200 - 1215	79	114	193	
1215 - 1230	89	124	213	
1230 - 1245	91	101	192	
1245 - 1300	90	111	201	799
1300 - 1315	93	118	211	
1315 - 1330	88	139	227	
1330 - 1345	101	116	217	
1345 - 1400	129	134	263	918
1400 - 1415	109	132	241	
1415 - 1430	146	117	263	
1430 - 1445	147	136	283	
1445 - 1500	133	141	274	1061
1500 - 1515	153	126	279	
1515 - 1530	168	148	316	
1530 - 1545	183	157	340	
1545 - 1600	218	159	377	1312
1600 - 1615	239	130	369	
1615 - 1630	200	154	354	
1630 - 1645	203	125	328	
1645 - 1700	213	148	361	1412
1700 - 1715	245	131	376	
1715 - 1730	248	127	375	
1730 - 1745	241	142	383	
1745 - 1800	233	145	378	1512
1800 - 1815	214	136	350	
1815 - 1830	220	140	360	
1830 - 1845	194	134	328	
1845 - 1900	145	129	274	1312
1900 - 1915	123	124	247	
1915 - 1930	136	107	243	
1930 - 1945	151	90	241	
1945 - 2000	112	107	219	950
2000 - 2015	116	77	193	
2015 - 2030	110	87	197	
2030 - 2045	134	86	220	
2045 - 2100	112	95	207	817
2100 - 2115	99	81	180	
2115 - 2130	80	64	144	
2130 - 2145	78	46	124	
2145 - 2200	75	50	125	573
2200 - 2215	63	46	109	
2215 - 2230	55	45	100	
2230 - 2245	58	35	93	
2245 - 2300	39	35	74	376
2300 - 2315	44	26	70	
2315 - 2330	43	18	61	
2330 - 2345	41	21	62	
2345 - 0000	44	25	69	262

Session Total	8674	10939	19613
Session Average	90.35	113.95	204.30
Session Percentage	44.23	55.77	

Appendix C
Growth Rate Summary

Growth Rate Based on U.S Census Bureau			
Geographic Area	2010	2020	2010-2020
	Census	Census	Population % Change
Dekalb County	691,893	764,382	1.00%

GDOT Historical Growth Rate														
Location	Station ID	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	5 year	10 year
Browns Mill Rd w/o Salem Road	089-0247		17,366		16,296		14,852		17,218				4.0%	0.1%
Snapfinger Rd s/o Cleveland Rd	089-0201		34,676		30,495				23,928		24,915		6.6%	4.2%
Snapfinger Rd s/o Cleveland Rd	089-0198		16,170	14,908		14,878		12,310		11,318		12,044	5.6%	3.3%
Thompson Mill Rd w/o Miller Rd	089-3563		8,924			7,660				6,682	5,808		5.2%	5.5%
Panola Rd n/o Salem Road	089-0547		18,736			16,955				17,904			3.4%	0.7%
5 & 10 - Year Average													5.0%	2.8%
Weighted Average													3.9%	

Growth Rate Based on Georgia Governor's Office of Planning and Budget Annual Population Projections						
Geographic Area	Average 5-Year Growth Rate From 2020-2050					
	2020-2025	2025-2030	2030-2035	2035-2040	2040-2045	2045-2050
Dekalb County	1.19%	0.72%	0.46%	0.33%	0.29%	0.22%
	Average			0.54%		
	Average 10-Year Growth Rate From 2020-2050					
	2020-2030	2030-2040	2040-2050			
	0.83%	0.41%	0.26%			
Average			0.50%			

ARC				10 Year	10 Year	20 Year
Location	2020	2030	2040	2020-2030	2030-2040	2020-2040
SR 212 e/o Snapfinger Rd	21773	23718	24816	1.0%	0.5%	0.7%
Snapfinger Rd s/o SR 212	23613	26182	29362	1.2%	1.4%	1.2%
Snapfinger Rd n/o SR 212	41615	45677	49819	1.0%	1.1%	1.0%
Salem Rd n/o SR 212	3809	4808	5225	2.6%	1.0%	1.6%
SR 212 e/o Salem Road	17486	19042	19931	1.0%	0.5%	0.7%
Panola Rd n/o Salem Rd	18851	21714	24455	1.6%	1.5%	1.4%
AVG				1.4%	1.0%	1.1%
				1.2%		

Average	1.9%
----------------	-------------

Appendix D
Synchro Reports

Synchro Reports
Existing Year (2023)

HCM 6th Signalized Intersection Summary
 1: SR 155 & SR 212

AM Existing
 08/30/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	146	1177	1065	134	275	345
Future Volume (veh/h)	146	1177	1065	134	275	345
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	155	0	1133	0	293	375
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.92
Percent Heavy Veh, %	10	2	2	2	3	3
Cap, veh/h	183		1110		296	2747
Arrive On Green	0.11	0.00	0.59	0.00	0.13	0.78
Sat Flow, veh/h	1668	1585	1870	1585	1767	3618
Grp Volume(v), veh/h	155	0	1133	0	293	375
Grp Sat Flow(s),veh/h/ln	1668	1585	1870	1585	1767	1763
Q Serve(g_s), s	9.8	0.0	64.0	0.0	13.8	2.8
Cycle Q Clear(g_c), s	9.8	0.0	64.0	0.0	13.8	2.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	183		1110		296	2747
V/C Ratio(X)	0.85		1.02		0.99	0.14
Avail Cap(c_a), veh/h	217		1110		296	2747
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	0.0	21.9	0.0	38.9	2.9
Incr Delay (d2), s/veh	23.0	0.0	32.2	0.0	49.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	35.3	0.0	11.4	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	70.1	0.0	54.1	0.0	88.0	3.0
LnGrp LOS	E		F		F	A
Approach Vol, veh/h	155		1133			668
Approach Delay, s/veh	70.1		54.1			40.3
Approach LOS	E		D			D
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		17.8	20.0	70.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	14.0	64.0
Max Q Clear Time (g_c+I1), s		4.8		11.8	15.8	66.0
Green Ext Time (p_c), s		2.8		0.1	0.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	50.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	31.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕		↕			↕	↕
Traffic Vol, veh/h	6	390	12	18	1193	6	69	1	39	5	0	56
Future Vol, veh/h	6	390	12	18	1193	6	69	1	39	5	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	4	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	415	13	19	1269	6	73	1	41	5	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1275	0	0	428	0	0	1767	1740	415	1762	1747	1269
Stage 1	-	-	-	-	-	-	427	427	-	1307	1307	-
Stage 2	-	-	-	-	-	-	1340	1313	-	455	440	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	545	-	-	1131	-	-	~65	87	637	66	86	205
Stage 1	-	-	-	-	-	-	606	585	-	196	230	-
Stage 2	-	-	-	-	-	-	188	228	-	585	578	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	545	-	-	1131	-	-	~44	81	637	58	80	205
Mov Cap-2 Maneuver	-	-	-	-	-	-	~44	81	-	58	80	-
Stage 1	-	-	-	-	-	-	598	577	-	193	217	-
Stage 2	-	-	-	-	-	-	126	215	-	538	570	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			\$ 498.4			38.7		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	66	545	-	-	1131	-	-	170
HCM Lane V/C Ratio	1.757	0.012	-	-	0.017	-	-	0.382
HCM Control Delay (s)	\$ 498.4	11.7	0	-	8.2	0	-	38.7
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	10.4	0	-	-	0.1	-	-	1.6

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on the Highway Capacity Manual 2010 Edition and 6th Edition Methodologies, NCHRP Report 672, and FHWA's Roundabout Informational Guide. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Dylan Fox, EIT
Agency/Company:	SEI
Date:	
Project Name or PI#:	N/A
Year, Peak Period:	2023, AM
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd

Insert Project Information Here in the BLUE SPACE. This information is linked to the Mini, Single Lane and Multi Lane Worksheets.

Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are planning level thresholds. A capacity analysis should be performed to determine lane configuration based on traffic volumes.

# of circulatory lanes	ADTs (current/ build year)	Condition met?	% traffic on Major Road	Condition met?
Mini	less than 15,000		less than 90%	
Single Lane	less than 25,000		less than 90%	
Multi-Lane	less than 45,000		less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

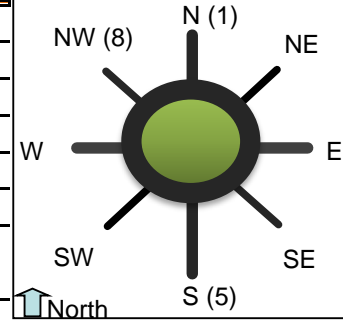
Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information		v 4.2
Analyst:	Dylan Fox, EIT	
Agency/Co:	SEI	
Date:		
Project or PI#:	N/A	
Year, Peak Hour:	2023, AM	
County/District:	DeKalb/District 7	
Intersection:	SR 212 @ Salem Rd	



Volumes		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph	1				2	9		
	NE (2), vph								
	E (3), vph	7				1			
	SE (4), vph								
	S (5), vph	3							
	SW (6), vph								
	W (7), vph	206	243			357	395		
	NW (8), vph								
Entry Volume, vph		217	243	0	0	360	404	0	0

Lane Designation		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph	1				168	0		
	NE (2), vph								
	E (3), vph	1				24	217		
	SE (4), vph								
	S (5), vph					0			
	SW (6), vph								
	W (7), vph					38			
	NW (8), vph								
Entry Volume, vph		2	0	0	0	230	217	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	96.0%	96.0%	98.0%	100.0%	100.0%	100.0%	96.0%	100.0%
% Heavy Vehicles	4.0%	4.0%	2.0%	0.0%	0.0%	0.0%	4.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F _{hv}	0.962	1.000	0.980	1.000	1.000	1.000	0.962	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	1	0	12	0	1	0	184	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	8	0	1	0	1	0	264	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	3	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	492	0	807	0	0	0	42	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	504	0	820	0	2	0	489	0
	Entry flow Lane 1, pcu/h	238	0	387	0	2	0	252	0
	Entry flow Lane 2, pcu/h	266	0	434	0	0	0	238	0
	Conflicting flow, pcu/h	850	0	228	0	499	0	13	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	594	663	1073	1147	929	NA	1283	1350
Entry Flow Rates, veh/h	228	256	379	425	2	0	242	228
V/C ratio	0.38	0.39	0.35	0.37	0.00	0.00	0.19	0.17
Control Delay, s/veh	11.7	10.7	6.9	6.8	3.9	0.0	4.4	4.1
LOS	B	B	A	A	A	#N/A	A	A
Average Queue (ft)	19	19	18	20	0	0	7	6
95th % Queue (ft)	47	47	41	44	0	#VALUE!	18	16
Approach Delay, LOS	11.2 sec, LOS B		6.9 sec, LOS A		3.9 sec, LOS A		4.2 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	7.4	Int LOS	A	Max Approach V/C	0.39
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Notes:

v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

HCM 6th Signalized Intersection Summary
1: SR 155 & SR 212

PM Existing
08/30/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↑	↷	↶	↑↑
Traffic Volume (veh/h)	80	465	476	121	845	920
Future Volume (veh/h)	80	465	476	121	845	920
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	0	486	0	862	939
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	106		719		900	2925
Arrive On Green	0.06	0.00	0.38	0.00	0.38	0.82
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	82	0	486	0	862	939
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1777
Q Serve(g_s), s	4.6	0.0	22.0	0.0	34.5	6.5
Cycle Q Clear(g_c), s	4.6	0.0	22.0	0.0	34.5	6.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	106		719		900	2925
V/C Ratio(X)	0.78		0.68		0.96	0.32
Avail Cap(c_a), veh/h	244		719		992	2925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	26.1	0.0	18.6	2.2
Incr Delay (d2), s/veh	11.4	0.0	5.0	0.0	18.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	10.6	0.0	23.2	1.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.8	0.0	31.1	0.0	36.9	2.5
LnGrp LOS	E		C		D	A
Approach Vol, veh/h	82		486			1801
Approach Delay, s/veh	58.8		31.1			18.9
Approach LOS	E		C			B
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		12.1	44.7	45.3
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	44.0	34.0
Max Q Clear Time (g_c+I1), s		8.5		6.6	36.5	24.0
Green Ext Time (p_c), s		8.8		0.1	2.2	2.2

Intersection Summary

HCM 6th Ctrl Delay	22.8
HCM 6th LOS	C

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	4.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕			↕	
Traffic Vol, veh/h	43	833	76	39	472	2	41	0	31	3	0	32
Future Vol, veh/h	43	833	76	39	472	2	41	0	31	3	0	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	850	78	40	482	2	42	0	32	3	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	484	0	0	928	0	0	1518	1502	850	1555	1578	482
Stage 1	-	-	-	-	-	-	938	938	-	562	562	-
Stage 2	-	-	-	-	-	-	580	564	-	993	1016	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1079	-	-	737	-	-	98	122	360	92	109	584
Stage 1	-	-	-	-	-	-	317	343	-	512	510	-
Stage 2	-	-	-	-	-	-	500	508	-	296	315	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1079	-	-	737	-	-	82	103	360	74	92	584
Mov Cap-2 Maneuver	-	-	-	-	-	-	82	103	-	74	92	-
Stage 1	-	-	-	-	-	-	290	314	-	468	472	-
Stage 2	-	-	-	-	-	-	437	470	-	247	288	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.8			70.5			15.9		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	123	1079	-	-	737	-	-	367
HCM Lane V/C Ratio	0.597	0.041	-	-	0.054	-	-	0.097
HCM Control Delay (s)	70.5	8.5	0	-	10.2	0	-	15.9
HCM Lane LOS	F	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	3	0.1	-	-	0.2	-	-	0.3

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on the Highway Capacity Manual 2010 Edition and 6th Edition Methodologies, NCHRP Report 672, and FHWA's Roundabout Informational Guide. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Dylan Fox, EIT
Agency/Company:	SEI
Date:	
Project Name or PI#:	N/A
Year, Peak Period:	2023, PM
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd

Insert Project Information Here in the BLUE SPACE. This information is linked to the Mini, Single Lane and Multi Lane Worksheets.

Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are planning level thresholds. A capacity analysis should be performed to determine lane configuration based on traffic volumes.

# of circulatory lanes	ADTs (current/ build year)	Condition met?	% traffic on Major Road	Condition met?
Mini	less than 15,000	No	less than 90%	
Single Lane	less than 25,000	Yes	less than 90%	
Multi-Lane	less than 45,000	Yes	less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

Proximity to Other Intersections

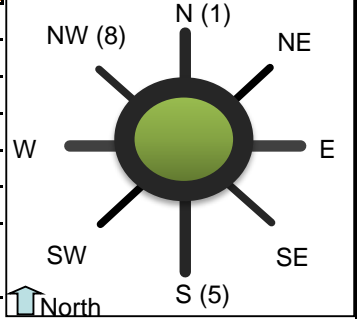
2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information v 4.2

Analyst:	Dylan Fox, EIT
Agency/Co:	SEI
Date:	
Project or PI#:	N/A
Year, Peak Hour:	2023, PM
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd



Volumes Entry Legs (FROM)

		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph						26		
	NE (2), vph								
	E (3), vph	6							
	SE (4), vph								
	S (5), vph	2				1			
	SW (6), vph								
	W (7), vph	75	94			172	169		
	NW (8), vph								
Entry Volume, vph	83	94	0	0	173	195	0	0	

Entry Legs (TO)

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
	N (1), vph	2				219			
	NE (2), vph								
	E (3), vph					193	457		
	SE (4), vph								
	S (5), vph	1					7		
	SW (6), vph								
	W (7), vph	3				4			
	NW (8), vph								
Entry Volume, vph	6	0	0	0	416	464	0	0	

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics

	N	NE	E	SE	S	SW	W	NW
% Cars	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Heavy Vehicles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.98	0.95	0.98	0.95	0.98	0.95	0.98	0.95
F _{hv}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	27	0	2	0	223	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	6	0	0	0	0	0	663	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	2	0	1	0	1	0	7	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	172	0	348	0	3	0	4	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	181	0	376	0	6	0	898	0
Entry flow Lane 1, pcu/h	85	0	177	0	6	0	424	0	
Entry flow Lane 2, pcu/h	96	0	199	0	0	0	473	0	
Conflicting flow, pcu/h	357	0	234	0	897	0	10	0	

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	972	1048	1089	1164	662	NA	1337	1408
Entry Flow Rates, veh/h	85	96	177	199	6	0	424	473
V/C ratio	0.09	0.09	0.16	0.17	0.01	0.00	0.32	0.34
Control Delay, s/veh	4.5	4.2	4.8	4.6	5.5	0.0	5.5	5.5
LOS	A	A	A	A	A	#N/A	A	A
Average Queue (ft)	3	3	6	6	0	0	16	18
95th % Queue (ft)	7	8	14	15	1	#VALUE!	34	38
Approach Delay, LOS	4.4 sec, LOS A		4.7 sec, LOS A		5.5 sec, LOS A		5.5 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	5.2	Int LOS	A	Max Approach V/C	0.34
-------------------------	-----	---------	---	------------------	------

Notes: v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

Synchro Reports
No-Build Year (2026)

HCM 6th Signalized Intersection Summary
 1: SR 155 & SR 212

AM No Build
 08/30/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↶	↶	↑	↷	↶	↑↑
Traffic Volume (veh/h)	154	1245	1127	142	291	365
Future Volume (veh/h)	154	1245	1127	142	291	365
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	164	0	1199	0	310	397
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.92
Percent Heavy Veh, %	10	2	2	2	3	3
Cap, veh/h	191		1104		295	2731
Arrive On Green	0.11	0.00	0.59	0.00	0.13	0.77
Sat Flow, veh/h	1668	1585	1870	1585	1767	3618
Grp Volume(v), veh/h	164	0	1199	0	310	397
Grp Sat Flow(s),veh/h/ln	1668	1585	1870	1585	1767	1763
Q Serve(g_s), s	10.5	0.0	64.0	0.0	14.0	3.1
Cycle Q Clear(g_c), s	10.5	0.0	64.0	0.0	14.0	3.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	191		1104		295	2731
V/C Ratio(X)	0.86		1.09		1.05	0.15
Avail Cap(c_a), veh/h	215		1104		295	2731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	0.0	22.2	0.0	39.2	3.1
Incr Delay (d2), s/veh	25.3	0.0	53.6	0.0	66.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	42.0	0.0	12.9	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	72.5	0.0	75.8	0.0	106.1	3.2
LnGrp LOS	E		F		F	A
Approach Vol, veh/h	164		1199			707
Approach Delay, s/veh	72.5		75.8			48.3
Approach LOS	E		E			D
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		18.4	20.0	70.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	14.0	64.0
Max Q Clear Time (g_c+I1), s		5.1		12.5	16.0	66.0
Green Ext Time (p_c), s		3.0		0.1	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			66.2			
HCM 6th LOS			E			

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	47.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕		↕			↕	↕
Traffic Vol, veh/h	6	413	13	19	1262	6	73	1	41	5	0	56
Future Vol, veh/h	6	413	13	19	1262	6	73	1	41	5	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	4	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	439	14	20	1343	6	78	1	44	5	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1349	0	0	453	0	0	1867	1840	439	1864	1848	1343
Stage 1	-	-	-	-	-	-	451	451	-	1383	1383	-
Stage 2	-	-	-	-	-	-	1416	1389	-	481	465	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	510	-	-	1108	-	-	~55	75	618	56	75	186
Stage 1	-	-	-	-	-	-	588	571	-	178	211	-
Stage 2	-	-	-	-	-	-	170	210	-	566	563	-
Platoon blocked, %		-	-	-	-	-						
Mov Cap-1 Maneuver	510	-	-	1108	-	-	~35	68	618	48	68	186
Mov Cap-2 Maneuver	-	-	-	-	-	-	~35	68	-	48	68	-
Stage 1	-	-	-	-	-	-	579	562	-	175	196	-
Stage 2	-	-	-	-	-	-	107	195	-	517	554	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			\$ 763.8			45.7		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	53	510	-	-	1108	-	-	151
HCM Lane V/C Ratio	2.308	0.013	-	-	0.018	-	-	0.43
HCM Control Delay (s)	\$ 763.8	12.1	0	-	8.3	0	-	45.7
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	12.4	0	-	-	0.1	-	-	1.9

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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Agency/Company:	SEI
Date:	
Project Name or PI#:	N/A
Year, Peak Period:	2026, AM No Build
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd

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# of circulatory lanes	ADTs (current/ build year)	Condition met?	% traffic on Major Road	Condition met?
Mini	less than 15,000		less than 90%	
Single Lane	less than 25,000		less than 90%	
Multi-Lane	less than 45,000		less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

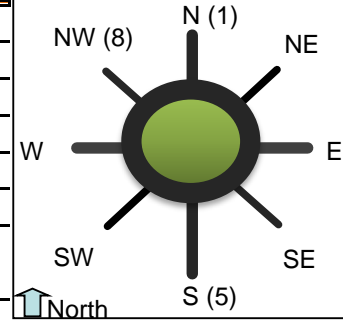
Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information		v 4.2
Analyst:	Dylan Fox, EIT	
Agency/Co:	SEI	
Date:		
Project or PI#:	N/A	
Year, Peak Hour:	2026, AM No Build	
County/District:	DeKalb/District 7	
Intersection:	SR 212 @ Salem Rd	



Volumes **Entry Legs (FROM)**

Lane Designation		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph	1				2	10		
	NE (2), vph								
	E (3), vph	7				1			
	SE (4), vph								
	S (5), vph	3							
	SW (6), vph								
	W (7), vph	218	257			378	418		
	NW (8), vph								
Entry Volume, vph		229	257	0	0	381	428	0	0

Entry Legs (TO)

Lane Designation		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
	N (1), vph	1				178	0		
	NE (2), vph								
	E (3), vph	1				26	229		
	SE (4), vph								
	S (5), vph					0			
	SW (6), vph								
	W (7), vph					40			
	NW (8), vph								
Entry Volume, vph		2	0	0	0	244	229	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	96.0%	96.0%	98.0%	100.0%	100.0%	100.0%	96.0%	100.0%
% Heavy Vehicles	4.0%	4.0%	2.0%	0.0%	0.0%	0.0%	4.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F _{hv}	0.962	1.000	0.980	1.000	1.000	1.000	0.962	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	1	0	13	0	1	0	195	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	8	0	1	0	1	0	279	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	3	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	520	0	855	0	0	0	44	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	532	0	869	0	2	0	518	0
	Entry flow Lane 1, pcu/h	251	0	409	0	2	0	267	0
	Entry flow Lane 2, pcu/h	281	0	460	0	0	0	251	0
	Conflicting flow, pcu/h	900	0	241	0	528	0	13	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	567	636	1061	1134	907	NA	1283	1350
Entry Flow Rates, veh/h	241	271	401	451	2	0	257	241
V/C ratio	0.42	0.43	0.38	0.40	0.00	0.00	0.20	0.18
Control Delay, s/veh	13.1	11.9	7.3	7.2	4.0	0.0	4.5	4.1
LOS	B	B	A	A	A	#N/A	A	A
Average Queue (ft)	22	22	20	23	0	0	8	7
95th % Queue (ft)	55	55	46	49	0	#VALUE!	19	17
Approach Delay, LOS	12.5 sec, LOS B		7.3 sec, LOS A		4 sec, LOS A		4.3 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness














Int Control Delay (sec)	7.9	Int LOS	A	Max Approach V/C	0.43
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Notes: v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

HCM 6th Signalized Intersection Summary
 1: SR 155 & SR 212

PM No Build
 08/30/2023

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						 
Traffic Volume (veh/h)	85	492	504	128	894	973
Future Volume (veh/h)	85	492	504	128	894	973
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	87	0	514	0	912	993
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	112		621		905	2914
Arrive On Green	0.06	0.00	0.33	0.00	0.43	0.82
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	87	0	514	0	912	993
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1777
Q Serve(g_s), s	4.9	0.0	25.9	0.0	44.0	7.1
Cycle Q Clear(g_c), s	4.9	0.0	25.9	0.0	44.0	7.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	112		621		905	2914
V/C Ratio(X)	0.78		0.83		1.01	0.34
Avail Cap(c_a), veh/h	243		621		905	2914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	31.5	0.0	22.0	2.3
Incr Delay (d2), s/veh	11.0	0.0	12.1	0.0	31.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.0	13.5	0.0	26.4	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.3	0.0	43.6	0.0	53.7	2.6
LnGrp LOS	E		D		F	A
Approach Vol, veh/h	87		514			1905
Approach Delay, s/veh	58.3		43.6			27.1
Approach LOS	E		D			C
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		12.4	50.0	40.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	44.0	34.0
Max Q Clear Time (g_c+I1), s		9.1		6.9	46.0	27.9
Green Ext Time (p_c), s		9.5		0.1	0.0	1.7
Intersection Summary						
HCM 6th Ctrl Delay			31.6			
HCM 6th LOS			C			
Notes						
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.						

Intersection												
Int Delay, s/veh	5.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗		↔			↔	
Traffic Vol, veh/h	45	881	80	41	499	2	43	0	33	3	0	34
Future Vol, veh/h	45	881	80	41	499	2	43	0	33	3	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	899	82	42	509	2	44	0	34	3	0	35

Major/Minor	Major1		Major2		Minor1		Minor2					
Conflicting Flow All	511	0	0	981	0	0	1603	1586	899	1642	1666	509
Stage 1	-	-	-	-	-	-	991	991	-	593	593	-
Stage 2	-	-	-	-	-	-	612	595	-	1049	1073	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1054	-	-	704	-	-	85	108	338	80	97	564
Stage 1	-	-	-	-	-	-	296	324	-	492	493	-
Stage 2	-	-	-	-	-	-	480	492	-	275	297	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1054	-	-	704	-	-	69	89	338	62	80	564
Mov Cap-2 Maneuver	-	-	-	-	-	-	69	89	-	62	80	-
Stage 1	-	-	-	-	-	-	267	292	-	444	452	-
Stage 2	-	-	-	-	-	-	413	451	-	223	268	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0.4		0.8		102.3		16.9	
HCM LOS					F		C	

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	105	1054	-	-	704	-	-	340
HCM Lane V/C Ratio	0.739	0.044	-	-	0.059	-	-	0.111
HCM Control Delay (s)	102.3	8.6	0	-	10.4	0	-	16.9
HCM Lane LOS	F	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	3.9	0.1	-	-	0.2	-	-	0.4

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on the Highway Capacity Manual 2010 Edition and 6th Edition Methodologies, NCHRP Report 672, and FHWA's Roundabout Informational Guide. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Dylan Fox, EIT
Agency/Company:	SEI
Date:	
Project Name or PI#:	N/A
Year, Peak Period:	2026, PM No Build
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd

Insert Project Information Here in the BLUE SPACE. This information is linked to the Mini, Single Lane and Multi Lane Worksheets.

Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are planning level thresholds. A capacity analysis should be performed to determine lane configuration based on traffic volumes.

# of circulatory lanes	ADTs (current/ build year)	Condition met?	% traffic on Major Road	Condition met?
Mini	less than 15,000	No	less than 90%	
Single Lane	less than 25,000	Yes	less than 90%	
Multi-Lane	less than 45,000	Yes	less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

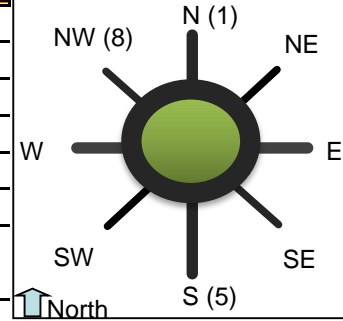
Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information		v 4.2
Analyst:	Dylan Fox, EIT	
Agency/Co:	SEI	
Date:		
Project or PI#:	N/A	
Year, Peak Hour:	2026, PM No Build	
County/District:	DeKalb/District 7	
Intersection:	SR 212 @ Salem Rd	



Volumes **Entry Legs (FROM)**

		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph						28		
	NE (2), vph								
	E (3), vph	6							
	SE (4), vph								
	S (5), vph	2				1			
	SW (6), vph								
	W (7), vph	80	99			182	179		
	NW (8), vph								
Entry Volume, vph		88	99	0	0	183	207	0	0

Entry Legs (TO)

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph	2				232			
	NE (2), vph								
	E (3), vph					204	484		
	SE (4), vph								
	S (5), vph	1					7		
	SW (6), vph								
	W (7), vph	3				4			
	NW (8), vph								
Entry Volume, vph		6	0	0	0	440	491	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Heavy Vehicles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.98	0.95	0.98	0.95	0.98	0.95	0.98	0.95
F _{hv}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	29	0	2	0	237	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	6	0	0	0	0	0	702	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	2	0	1	0	1	0	7	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	183	0	368	0	3	0	4	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	191	0	398	0	6	0	950	0
	Entry flow Lane 1, pcu/h	90	0	187	0	6	0	449	0
	Entry flow Lane 2, pcu/h	101	0	211	0	0	0	501	0
	Conflicting flow, pcu/h	378	0	247	0	949	0	10	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	954	1030	1076	1151	634	NA	1337	1408
Entry Flow Rates, veh/h	90	101	187	211	6	0	449	501
V/C ratio	0.09	0.10	0.17	0.18	0.01	0.00	0.34	0.36
Control Delay, s/veh	4.6	4.4	4.9	4.7	5.8	0.0	5.7	5.7
LOS	A	A	A	A	A	#N/A	A	A
Average Queue (ft)	3	3	6	7	0	0	18	20
95th % Queue (ft)	8	8	16	17	1	#VALUE!	37	41
Approach Delay, LOS	4.5 sec, LOS A		4.8 sec, LOS A		5.8 sec, LOS A		5.7 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	5.3	Int LOS	A	Max Approach V/C	0.36
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Notes: v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

Synchro Reports
Build Year (2026)

HCM 6th Signalized Intersection Summary
1: SR 155 & SR 212

AM Build
08/30/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	157	1263	1127	144	296	365
Future Volume (veh/h)	157	1263	1127	144	296	365
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1752	1870	1870	1870	1856	1856
Adj Flow Rate, veh/h	167	0	1199	0	315	397
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.92
Percent Heavy Veh, %	10	2	2	2	3	3
Cap, veh/h	194		1102		294	2726
Arrive On Green	0.12	0.00	0.59	0.00	0.13	0.77
Sat Flow, veh/h	1668	1585	1870	1585	1767	3618
Grp Volume(v), veh/h	167	0	1199	0	315	397
Grp Sat Flow(s),veh/h/ln	1668	1585	1870	1585	1767	1763
Q Serve(g_s), s	10.7	0.0	64.0	0.0	14.0	3.1
Cycle Q Clear(g_c), s	10.7	0.0	64.0	0.0	14.0	3.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	194		1102		294	2726
V/C Ratio(X)	0.86		1.09		1.07	0.15
Avail Cap(c_a), veh/h	215		1102		294	2726
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.1	0.0	22.3	0.0	39.3	3.2
Incr Delay (d2), s/veh	26.1	0.0	54.4	0.0	72.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	42.2	0.0	13.4	0.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	73.2	0.0	76.8	0.0	112.0	3.3
LnGrp LOS	E		F		F	A
Approach Vol, veh/h	167		1199			712
Approach Delay, s/veh	73.2		76.8			51.4
Approach LOS	E		E			D
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		18.7	20.0	70.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	14.0	64.0
Max Q Clear Time (g_c+I1), s		5.1		12.7	16.0	66.0
Green Ext Time (p_c), s		3.0		0.1	0.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			67.8			
HCM 6th LOS			E			

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	47.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕		↕			↕	↕
Traffic Vol, veh/h	6	420	13	19	1264	6	73	1	41	5	0	56
Future Vol, veh/h	6	420	13	19	1264	6	73	1	41	5	0	56
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	4	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	447	14	20	1345	6	78	1	44	5	0	60

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1351	0	0	461	0	0	1877	1850	447	1874	1858	1345
Stage 1	-	-	-	-	-	-	459	459	-	1385	1385	-
Stage 2	-	-	-	-	-	-	1418	1391	-	489	473	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	509	-	-	1100	-	-	~55	74	612	55	73	185
Stage 1	-	-	-	-	-	-	582	566	-	177	211	-
Stage 2	-	-	-	-	-	-	170	209	-	561	558	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	509	-	-	1100	-	-	~35	67	612	47	67	185
Mov Cap-2 Maneuver	-	-	-	-	-	-	~35	67	-	47	67	-
Stage 1	-	-	-	-	-	-	573	557	-	174	196	-
Stage 2	-	-	-	-	-	-	107	194	-	512	549	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.1			\$ 763.8			46.6		
HCM LOS							F			E		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	53	509	-	-	1100	-	-	149
HCM Lane V/C Ratio	2.308	0.013	-	-	0.018	-	-	0.436
HCM Control Delay (s)	\$ 763.8	12.2	0	-	8.3	0	-	46.6
HCM Lane LOS	F	B	A	-	A	A	-	E
HCM 95th %tile Q(veh)	12.4	0	-	-	0.1	-	-	2

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Welcome to GDOT's Roundabout Analysis Tool. This tool is designed for the user to determine the functionality of a proposed roundabout. The analysis is based on the Highway Capacity Manual 2010 Edition and 6th Edition Methodologies, NCHRP Report 672, and FHWA's Roundabout Informational Guide. Please read the notes in the [Instructions](#) tab before using the spreadsheet.

Analyst:	Dylan Fox, EIT
Agency/Company:	SEI
Date:	
Project Name or PI#:	N/A
Year, Peak Period:	2026, AM Build
County/District:	DeKalb/District 7
Intersection:	SR 212 @ Salem Rd

Insert Project Information Here in the BLUE SPACE. This information is linked to the Mini, Single Lane and Multi Lane Worksheets.

Roundabout Considerations Worksheet

Roundabouts may not operate well if there is too much traffic entering the intersection or if the percentage of traffic on the major road is too high. Candidate intersections shall be analyzed to determine whether a roundabout will perform acceptably. Shown below are planning level thresholds. A capacity analysis should be performed to determine lane configuration based on traffic volumes.

# of circulatory lanes	ADTs (current/ build year)	Condition met?	% traffic on Major Road	Condition met?
Mini	less than 15,000		less than 90%	
Single Lane	less than 25,000		less than 90%	
Multi-Lane	less than 45,000		less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

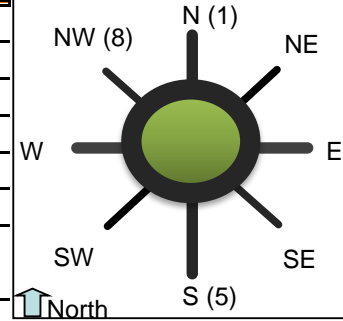
Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information		v 4.2
Analyst:	Dylan Fox, EIT	
Agency/Co:	SEI	
Date:		
Project or PI#:	N/A	
Year, Peak Hour:	2026, AM Build	
County/District:	DeKalb/District 7	
Intersection:	SR 212 @ Salem Rd	



Volumes		Entry Legs (FROM)							
		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph	1				2	10		
	NE (2), vph								
	E (3), vph	7				1			
	SE (4), vph								
	S (5), vph	3							
	SW (6), vph								
	W (7), vph	218	258			378	418		
	NW (8), vph								
Entry Volume, vph		229	258	0	0	381	428	0	0
		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
	N (1), vph	1				180	0		
	NE (2), vph								
	E (3), vph	1				27	233		
	SE (4), vph								
	S (5), vph					0			
	SW (6), vph								
	W (7), vph					40			
	NW (8), vph								
Entry Volume, vph		2	0	0	0	247	233	0	0
		N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes		2	0	2	0	1	0	2	0
# of Conflict Flow Lanes		2	2	2	2	2	2	2	2
		N	NE	E	SE	S	SW	W	NW
Volume Characteristics		N	NE	E	SE	S	SW	W	NW
% Cars		96.0%	96.0%	98.0%	100.0%	100.0%	100.0%	96.0%	100.0%
% Heavy Vehicles		4.0%	4.0%	2.0%	0.0%	0.0%	0.0%	4.0%	0.0%
% Bicycles		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)		0	0	0	0	0	0	0	0
PHF		0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F _{hv}		0.962	1.000	0.980	1.000	1.000	1.000	0.962	1.000
F _{ped}		1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	1	0	13	0	1	0	197	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	8	0	1	0	1	0	285	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	3	0	0	0	0	0	0	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	521	0	855	0	0	0	44	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	533	0	869	0	2	0	525	0
	Entry flow Lane 1, pcu/h	251	0	409	0	2	0	270	0
	Entry flow Lane 2, pcu/h	282	0	460	0	0	0	255	0
	Conflicting flow, pcu/h	900	0	243	0	535	0	13	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	567	636	1058	1132	901	NA	1283	1350
Entry Flow Rates, veh/h	241	272	401	451	2	0	260	245
V/C ratio	0.42	0.43	0.38	0.40	0.00	0.00	0.20	0.18
Control Delay, s/veh	13.1	12.0	7.4	7.3	4.0	0.0	4.5	4.2
LOS	B	B	A	A	A	#N/A	A	A
Average Queue (ft)	22	23	20	23	0	0	8	7
95th % Queue (ft)	55	56	46	49	0	#VALUE!	20	17
Approach Delay, LOS	12.5 sec, LOS B		7.3 sec, LOS A		4 sec, LOS A		4.4 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	7.9	Int LOS	A	Max Approach V/C	0.43
-------------------------	-----	---------	---	------------------	------

Notes:

v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	↑
Traffic Vol, veh/h	7	433	1400	2	7	21
Future Vol, veh/h	7	433	1400	2	7	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	8	471	1522	2	8	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1524	0	-	0	2009 1522
Stage 1	-	-	-	-	1522 -
Stage 2	-	-	-	-	487 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	437	-	-	-	65 146
Stage 1	-	-	-	-	199 -
Stage 2	-	-	-	-	618 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	437	-	-	-	63 146
Mov Cap-2 Maneuver	-	-	-	-	63 -
Stage 1	-	-	-	-	194 -
Stage 2	-	-	-	-	618 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	437	-	-	-	195
HCM Lane V/C Ratio	0.017	-	-	-	0.156
HCM Control Delay (s)	13.4	0	-	-	26.8
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

HCM 6th Signalized Intersection Summary
1: SR 155 & SR 212

PM Build
08/30/2023



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	89	501	504	132	908	973
Future Volume (veh/h)	89	501	504	132	908	973
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No		No			No
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	0	514	0	927	993
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	116		619		902	2906
Arrive On Green	0.07	0.00	0.33	0.00	0.43	0.82
Sat Flow, veh/h	1781	1585	1870	1585	1781	3647
Grp Volume(v), veh/h	91	0	514	0	927	993
Grp Sat Flow(s),veh/h/ln	1781	1585	1870	1585	1781	1777
Q Serve(g_s), s	5.2	0.0	26.0	0.0	44.0	7.3
Cycle Q Clear(g_c), s	5.2	0.0	26.0	0.0	44.0	7.3
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	116		619		902	2906
V/C Ratio(X)	0.78		0.83		1.03	0.34
Avail Cap(c_a), veh/h	243		619		902	2906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	47.3	0.0	31.7	0.0	22.2	2.4
Incr Delay (d2), s/veh	10.8	0.0	12.3	0.0	37.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	13.6	0.0	27.8	1.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.0	0.0	43.9	0.0	59.5	2.7
LnGrp LOS	E		D		F	A
Approach Vol, veh/h	91		514			1920
Approach Delay, s/veh	58.0		43.9			30.1
Approach LOS	E		D			C
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		90.0		12.7	50.0	40.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		84.0		14.0	44.0	34.0
Max Q Clear Time (g_c+I1), s		9.3		7.2	46.0	28.0
Green Ext Time (p_c), s		9.5		0.1	0.0	1.7
Intersection Summary						
HCM 6th Ctrl Delay			33.9			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕		↕	↕		↕			↕	↕
Traffic Vol, veh/h	45	886	80	41	511	2	43	0	33	3	0	34
Future Vol, veh/h	45	886	80	41	511	2	43	0	33	3	0	34
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	200	-	-	200	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	98	98	98	98	98	98	98	98	98	98	98	98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	904	82	42	521	2	44	0	34	3	0	35

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	523	0	0	986	0	0	1620	1603	904	1659	1683	521
Stage 1	-	-	-	-	-	-	996	996	-	605	605	-
Stage 2	-	-	-	-	-	-	624	607	-	1054	1078	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1043	-	-	701	-	-	83	106	335	78	94	555
Stage 1	-	-	-	-	-	-	294	322	-	485	487	-
Stage 2	-	-	-	-	-	-	473	486	-	273	295	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1043	-	-	701	-	-	67	87	335	61	77	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	67	87	-	61	77	-
Stage 1	-	-	-	-	-	-	265	290	-	437	446	-
Stage 2	-	-	-	-	-	-	406	445	-	221	266	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.8			106.6			17.1		
HCM LOS							F			C		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	103	1043	-	-	701	-	-	335
HCM Lane V/C Ratio	0.753	0.044	-	-	0.06	-	-	0.113
HCM Control Delay (s)	106.6	8.6	0	-	10.5	0	-	17.1
HCM Lane LOS	F	A	A	-	B	A	-	C
HCM 95th %tile Q(veh)	4	0.1	-	-	0.2	-	-	0.4

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Single Lane	less than 25,000	Yes	less than 90%	
Multi-Lane	less than 45,000	Yes	less than 90%	

Other things to consider when evaluating roundabouts as an alternative are Right of Way, sight distance, environmental impacts, and access to adjacent properties.

Volume Information (for Analysis Time Period)

1 Enter the Major/Minor Street ADT Volumes in the Chart below:

	Volumes	Split
Major Street		0%
Minor Street		0%
Total volumes	0	

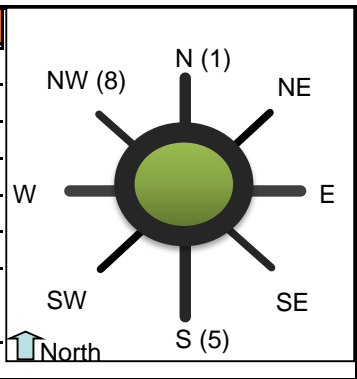
Proximity to Other Intersections

2 How close is the nearest signal (miles or feet)?

3 Is the proposed intersection located within a coordinated signal network?

Go up to next section...

General & Site Information		v 4.2
Analyst:	Dylan Fox, EIT	
Agency/Co:	SEI	
Date:		
Project or PI#:	N/A	
Year, Peak Hour:	2026, PM Build	
County/District:	DeKalb/District 7	
Intersection:	SR 212 @ Salem Rd	



Volumes Entry Legs (FROM)

		N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Lane Designation		Lf-Th-Rt	Right only	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
Exit Legs (TO)	N (1), vph						28		
	NE (2), vph								
	E (3), vph	6							
	SE (4), vph								
	S (5), vph	2				1			
	SW (6), vph								
	W (7), vph	81	102			189	183		
	NW (8), vph								
Entry Volume, vph		89	102	0	0	190	211	0	0

		S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation		Lf-Th-Rt	SELECT	SELECT	SELECT	Left-Thru	Right-Thru	SELECT	SELECT
	N (1), vph	2				233			
	NE (2), vph								
	E (3), vph					205	487		
	SE (4), vph								
	S (5), vph	1					7		
	SW (6), vph								
	W (7), vph	3				4			
	NW (8), vph								
Entry Volume, vph		6	0	0	0	442	494	0	0

	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	2	0
# of Conflict Flow Lanes	2	2	2	2	2	2	2	2

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Heavy Vehicles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.98	0.95	0.98	0.95	0.98	0.95	0.98	0.95
F _{hv}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
F _{ped}	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows		N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	29	0	2	0	238	0
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0	0
	E (3), pcu/h	6	0	0	0	0	0	706	0
	SE (4), pcu/h	0	0	0	0	0	0	0	0
	S (5), pcu/h	2	0	1	0	1	0	7	0
	SW (6), pcu/h	0	0	0	0	0	0	0	0
	W (7), pcu/h	187	0	380	0	3	0	4	0
	NW (8), pcu/h	0	0	0	0	0	0	0	0
	Entry flow, pcu/h	195	0	409	0	6	0	955	0
	Entry flow Lane 1, pcu/h	91	0	194	0	6	0	451	0
	Entry flow Lane 2, pcu/h	104	0	215	0	0	0	504	0
	Conflicting flow, pcu/h	389	0	248	0	954	0	10	0

Results: Approach Measures of Effectiveness

HCM 6th Edition	N		E		S		W	
	Lf-Th-Rt	Right only	Left-Thru	Right-Thru	Lf-Th-Rt	Lane 2	Left-Thru	Right-Thru
Entry Capacity, veh/h	944	1020	1075	1150	631	NA	1337	1408
Entry Flow Rates, veh/h	91	104	194	215	6	0	451	504
V/C ratio	0.10	0.10	0.18	0.19	0.01	0.00	0.34	0.36
Control Delay, s/veh	4.7	4.4	5.0	4.8	5.8	0.0	5.7	5.8
LOS	A	A	A	A	A	#N/A	A	A
Average Queue (ft)	3	3	7	7	0	0	18	20
95th % Queue (ft)	8	8	16	17	1	#VALUE!	38	41
Approach Delay, LOS	4.6 sec, LOS A		4.9 sec, LOS A		5.8 sec, LOS A		5.8 sec, LOS A	
Lane Designations	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			#N/A	#N/A			#N/A	#N/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			#VALUE!	#VALUE!			#VALUE!	#VALUE!
Approach Delay, LOS			#DIV/0!				#DIV/0!	

Overall Intersection Measures of Effectiveness

Int Control Delay (sec)	5.4	Int LOS	A	Max Approach V/C	0.36
-------------------------	-----	---------	---	------------------	------

Notes: v 4.2

Bypass Lane Merge Point Analysis (if applicable)						
Bypass Characteristics	Bypass #1	Bypass #2	Bypass #3	Bypass #4	Bypass #5	Bypass #6
Select Entry Leg from Bypass (FROM)						
Select Exit Leg for Bypass (TO)						
Does the bypass have a dedicated receiving lane?						
# of Conflicting Exit Flow Lanes	2	2	2	2	2	2
Volumes						
Entry Leg: Insert Right Turn Volume						
Exit Leg: (Select Input Method)						
Lane Flow in Exit Leg***						
Sum of inner circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Sum of outer circulatory flow lane to exit leg (leg bypass merges into)	N/A	N/A	N/A	N/A	N/A	N/A
Critical Lane Flow (Manual) in Exit Leg***						
Volume Characteristics						
PHF (Entry Leg)						
F _{HV} (Entry Leg)						
F _{ped}						
PHF (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
F _{HV} (Exit Leg)***	N/A	N/A	N/A	N/A	N/A	N/A
***Volume Characteristics are already taken into account for Default method ONLY. Insert Values above if Manual method.						
Entry/Conflicting Flows						
Entry Flow						
Conflicting Critical Flow						
Bypass Lane Results						
Entry Capacity of Bypass, veh/h						
Flow Rates of Exiting Traffic, veh/h						
V/C ratio						
Control Delay, sec/pcu						
LOS						
95th Percentile Queue (veh)						
95th % Queue (ft)						

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↕	↕	
Traffic Vol, veh/h	18	1022	577	12	5	13
Future Vol, veh/h	18	1022	577	12	5	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	1111	627	13	5	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	640	0	-	0	1778 627
Stage 1	-	-	-	-	627 -
Stage 2	-	-	-	-	1151 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	944	-	-	-	91 484
Stage 1	-	-	-	-	532 -
Stage 2	-	-	-	-	301 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	944	-	-	-	86 484
Mov Cap-2 Maneuver	-	-	-	-	86 -
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	301 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	944	-	-	-	310
HCM Lane V/C Ratio	0.021	-	-	-	0.063
HCM Control Delay (s)	8.9	0	-	-	17.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Appendix E
Trip Generation Report

Appendix F
ICE Analysis

GDOT PI#: Request By:
 County: GDOT District: 7 - Metro Atlanta
 Major Road: Road Class: Speed Limit:
 Crossing Road: Road Class: Speed Limit:
 Major Rd Direction: Area Type:
 Intersection Control: Project ID:
 Prepared By: Date:
 Project Purpose:

Existing Data Year:
 Project Opening Year:
 Project Design Year:
 Annual Growth Rate:
 K Factor*:

* K Factor = Proportion of average annual daily traffic occurring in the highest one hour of the day

LEGEND:

- 000 = AM Peak Approach Volume
- (000) = PM Peak Approach Volume
- [000] = ADT Volume (Estimate)

2026 OPENING YEAR VOLUMES

		28 (18) [494]					
		(0)	(13)	(0)	(5)		
		0	21	0	7		
		SB Browns Mill Prk					
		Peds	↔	↕	↔	Peds	0
		↔	↕	↔	↕	↔	(0)
		2026 Intersection Daily Entering Volume (est):					
		21,497					
		↔	↕	↔	↕	↔	2
		↔	↕	↔	↕	↔	(12)
		WB SR 212					
		↔	↕	↔	↕	↔	1,400
		↔	↕	↔	↕	↔	(577)
		EB SR 212					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		NB Browns Mill Prk					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		0 (0) [0]					

2023 EXISTING YEAR VOLUMES

APPROACH SPLITS:
SR 212: 100%
Browns Mill Prk: 0%

		0 (0) [0]					
		(0)	(0)	(0)	(0)		
		0	0	0	0		
		SB Browns Mill Prk					
		Peds	↔	↕	↔	Peds	0
		↔	↕	↔	↕	↔	(0)
		2023 Intersection Daily Entering Volume (est):					
		19,613					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		WB SR 212					
		↔	↕	↔	↕	↔	1,323
		↔	↕	↔	↕	↔	(545)
		EB SR 212					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		NB Browns Mill Prk					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		0 (0) [0]					

PEAK HR % TRUCKS:

EB	WB	NB	SB
4%	2%	0%	0%

2026 DESIGN YEAR VOLUMES

		28 (18) [494]					
		(0)	(13)	(0)	(5)		
		0	21	0	7		
		SB Browns Mill Prk					
		Peds	↔	↕	↔	Peds	0
		↔	↕	↔	↕	↔	(0)
		2026 Intersection Daily Entering Volume (est):					
		21,497					
		↔	↕	↔	↕	↔	2
		↔	↕	↔	↕	↔	(12)
		WB SR 212					
		↔	↕	↔	↕	↔	1,400
		↔	↕	↔	↕	↔	(577)
		EB SR 212					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		NB Browns Mill Prk					
		↔	↕	↔	↕	↔	0
		↔	↕	↔	↕	↔	(0)
		0 (0) [0]					

Introduction: In 2005, SAFETEA-LU established the Highway Safety Improvement Program (HSIP) and mandated that each state prepare a Strategic Highway Safety Plan (SHSP) to prioritize safety funding investments. Intersections quickly became a common component of most states' SHSP emphasis areas and HSIP project lists, including Georgia's SHSP. Intersection Control Evaluation (ICE) policies and procedures represent a traceable and transparent procedure to streamline the evaluation of intersection control alternatives, and further leverage safety advancements for intersection improvements beyond just the safety program. Approximately one-third of all traffic fatalities and roughly seventy five percent of all traffic crashes in Georgia occur at or adjacent to intersections. Accordingly, the Georgia SHSP includes an emphasis on enhancing intersection safety to advance the *Toward Zero Deaths* vision embraced by the Georgia Governor's Office of Highway Safety (GOHS). This ICE tool was developed to support the ICE policy, developed and adopted to help ensure that intersection investments across the entire Georgia highway system are selected, prioritized and implemented with defensible benefits for safety towards those ends.

Tool Goal: The goal of this ICE tool is to provide a simplified and consistent way of importing traffic, safety, cost, environmental impact and stakeholder posture data to assess and quantify intersection control improvement benefits. The tool supports the ICE policy and procedures to provide traceability, transparency, consistency and accountability when identifying and selecting an intersection control solution that both meets project purpose and reflects overall best value in terms of specific performance-based criteria.

Requirements: An ICE is required for any intersection improvement (e.g. new or modified intersection, widening/reconstruction or corridor project, or work accomplished through a driveway or encroachment permit that affects an intersection) where: **1)** the intersection includes at least one roadway designated as a State Route (State Highway System) or as part of the National Highway System; or **2)** the intersection will be designed or constructed using State or Federal funding. In certain circumstances where an ICE would otherwise be required, the requirement may be waived based on appropriate evidence presented with a written request. (See the **"Waiver"** tab to review criteria that may make a project waiver eligible and for instructions to submit a waiver request to the Department). An ICE is not required when the proposed work does not include any changes to the intersection design, involves only routine traffic signal timing and equipment maintenance, or for driveway permits where the driveway is not a new leg to an already existing intersection on either 1) a divided, multi-lane highway with a closed median and only right-in/right-out access or 2) an undivided roadway where the development is not required to construct left and/or right turn lanes (as per the Driveway Manual and District Traffic Engineer).

Two-Stage Process: A complete ICE process consists of two (2) distinct stages, and it is expected that the respective level of effort for completing both stages of ICE will correspond to the magnitude and complexity of the intersection. Prior to starting an ICE, the District Traffic Engineer and/or State Traffic Engineer should be consulted for advice on an appropriate level of effort. The Stage 1 and Stage 2 ICE forms are designed minimize required data inputs using drop-down menu choices and limiting text entry. All fields shaded grey include drop down menu choices and all fields shaded blue require data entry. All other cells in the worksheet are locked.

Stage 1 Screening Decision Record: Stage 1 should be conducted early in the project development process and is intended to inform which alternatives are worthy of further evaluation in Stage 2. Stage 1 serves as a screening effort meant to *eliminate* non-competitive options and identify which alternatives merit further considerations based on their practical feasibility. Users should use good engineering judgement in responding to the seven policy questions by selecting "Yes" or "No" in the drop-down boxes. Alternatives should not be summarily eliminated without due consideration, and reasons for eliminating or advancing an alternative should be documented in the "Screening Decision Justification" column.

Stage 2 Alternative Selection Decision Record: Stage 2 involves a more detailed and familiar evaluation of the alternatives identified in Stage 1 in order to support the selection of a preferred alternative that may be advanced to detailed design. Stage 2 data entry may require the use of external analysis tools to determine costs, operations and/or safety data that, combined with environmental and stakeholder posture data, form the basis of the ICE evaluation. A separate "CostEst" worksheet tab helps users develop pre-planning-level cost estimates for each Stage 2 alternative evaluated, and a separate Users Guide has been prepared to give guidance on Stage 1 and Stage 2 data entry. Once all data is entered, each alternative is scored and ranked, with the results reported at the bottom of the Stage 2 worksheet to inform on the best of the intersection controls evaluated for project recommendation.

Documentation: A complete ICE document consists of the combination of the outputs from either a completed and signed waiver form or both Stage 1 and Stage 2 worksheets (along with supporting costing and/or environmental documentation), to be included in the approved project Concept Report (or equivalent) or as a stand-alone document.

GDOT PI #	N/A	<p>Note: Up to 5 alternatives may be selected and evaluated; Use this ICE Stage 1 to screen 5 or fewer alternatives to evaluate in Stage 2</p> <p style="font-size: small; text-align: center;"> <i>1. Does alternative address the project need in a balanced manner and in scale with the project?</i> <i>2. Does alternative improve safety performance in terms of reducing severe crashes?</i> <i>3. Does alternative incorporate safety performance in operations (congestion, delay, reliability, etc.)?</i> <i>4. Does alternative appear feasible given the site characteristics, constraints & location context?</i> <i>5. Does alternative appear feasible with respect to other project factors?</i> <i>6. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</i> </p>							
Project Location:	SR 212 @ Browns Mill Prk								
Existing Control:	New Intersection or Other								
Prepared by:	SEI - Dylan Fox, EIT								
Date:		<p style="font-size: small; text-align: center;"> <i>7. Overall feasible alternative (select alternative for further evaluation in Stage 2)?</i> </p> <p style="text-align: right;">Screening Decision Justification:</p>							
<p style="font-size: small; text-align: center;">Answer "Yes" or "No" to each policy question for each control type to identify which alternatives should be evaluated in the Stage 2 Decision Record; enter justification in the rightmost column</p>									
<p>Intersection Alternative (see "Intersections" tab for detailed description of intersection/interchange type)</p>									
Unsignalized Intersections	Conventional (Minor Stop)	Yes	No	No	Yes	Yes	Yes	Yes	Includes RT lane on SR 212 and channelized right on driveway
	Conventional (All-Way Stop)	No	No	No	No	No	No	No	Does not meet warrants
	Mini Roundabout	No	No	No	No	No	No	No	ADT Volume too high
	Single Lane Roundabout	No	Yes	No	Yes	No	Yes	No	Too close to adjacent signalized intersection
	Multilane Roundabout	No	Yes	No	Yes	No	No	No	SR 212 is a single-lane facility
	RCUT (stop control)	No	Yes	No	No	Yes	No	No	No suitable U-turn location in the vicinity
	RIRO w/down stream U-Turn	No	Yes	No	No	No	No	No	No suitable U-turn location in the vicinity
	High-T (unsignalized)	Yes	Yes	No	No	Yes	No	No	Traffic Pattern not ideal for High-T configuration
	Offset-T Intersections	No	No	No	No	No	No	No	Intersection configuration is 3-legged
	Diamond Interch (Stop Control)	No	No	No	No	No	No	No	Volumes do not warrant grade separation
	Diamond Interch (RAB Control)	No	No	No	No	No	No	No	Volumes do not warrant grade separation
	No LT Lane Improvements	Yes	No	No	Yes	Yes	Yes	No	Does not meet auxiliary lane warrants
	No RT Lane Improvements								
Other unsignalized (provide description):	No	No	No	No	No	No	No	N/A	
Signalized Intersections	Traffic Signal	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Median U-Turn (Indirect Left)	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	RCUT (signalized)	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Displaced Left Turn (CFI)	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Continuous Green-T	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Jughandle	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Quadrant Roadway	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Diamond Interch (Signal Control)	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Diverging Diamond	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	Single Point Interchange	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	No LT Lane Improvements	No	No	No	No	No	No	No	N/A -Signal Warrants Not Satisfied
	No RT Lane Improvements								
Other Signalized (provide description):	No	No	No	No	No	No	No	N/A	

☐ = Intersection type selected for more detailed analysis in Stage 2 Alternative Selection Decision Record



GDOT INTERSECTION CONTROL EVALUATION (ICE) WAIVER FORM

ICE Version 2.22 | Revised 5/6/2022

Waiver Request - Level 2 / 3

In certain circumstances where an ICE would otherwise be required, an ICE may be waived based on appropriate evidence presented with a written request. Scenarios in which an ICE waiver request may be considered include:

1. Proposed improvements do not substantially alter the character of the intersection, and are considered minor in nature, such as extending existing turn lane(s) or modifying signal phasing at an existing traffic signal
2. The intersection consists of a public roadway intersecting a divided, multilane roadway where the access will be limited to a closed median with only right-in/right-out access that will operate acceptably; or
3. The intersection is along an undivided, two-lane roadway that will not be widened and meets the following criteria:
 - Low risk in terms of exposure (total intersection entering volume less than 1,000 vehicles /day)
 - Latest 5 years of crash history is not indicative of a crash problem (no discernible crash patterns coupled with low crash frequency and severity)
 - Layout has no unusual or undesirable geometric features (such as restricted sight distance)
 - The proposed changes are not expected to adversely affect safety

If only one alternative is determined to be feasible from the ICE Stage 1, then a waiver may be submitted in lieu of completing ICE Stage 2. The waiver must clearly explain why there is no other feasible alternative. A Waiver Form should also be submitted to document an agreed upon decision to select a preferred alternative other than the highest scoring alternative in Stage 2.

ICE waiver forms with supporting documentation should be submitted for approval to the Office of Traffic Operations or District Engineer (depending on Waiver level). Questions regarding the waiver process should be routed to the State Traffic Engineer.

Project Information: Location: SR 212 @ Browns Mill Prk
 County: Dekalb
 GDOT District: 7 - Metro Atlanta
 Area Type: Suburb/Transition
 Existing Intersection Control: New Intersection or Other

GDOT PI # (or N/A): N/A
 Requested By: DR Horton
 Prepared By: SEI - Dylan Fox, EIT
 Date: 1/0/1900
 Waiver Request Type: Driveway Permit

Traffic and Operations Data:^{1,2}

Intersection meets signal/AWS warrants?	None	
Traffic Analysis Type:	Intersection Delay	
Existing Major Street Avg Daily Traffic (ADT):	19,613	
Existing Minor Street Avg Daily Traffic (ADT):	0	
Analysis Period:	AM Peak	PM Peak
2026 Opening Yr Peak Hour Intersection Delay:	26.8 sec	17.4 sec
2026 Opening Yr Peak Hour Intersection V/C:	0.16	0.06
2026 Design Yr Peak Hour Intersection Delay:	26.8 sec	17.4 sec
2026 Design Yr Peak Hour Intersection V/C:	0.16	0.06

Crash Data (Required): ³						
Crash Type	Crash Severity					Years:
	K*	A*	B*	C*	O	0
Crash Data: Enter most recent 0 years of crash data						
Angle	0	0	0	0	0	#DIV/0!
Head-On	0	0	0	0	0	#DIV/0!
Rear End	0	0	0	0	0	#DIV/0!
Sideswipe - same	0	0	0	0	0	#DIV/0!
Sideswipe - opposite	0	0	0	0	0	#DIV/0!
Not Collision w/Motor Veh	0	0	0	0	0	#DIV/0!
TOTALS:	0	0	0	0	0	0

* Number of crashes resulting in injuries / fatalities, not number of persons

Description of Work / Justification for Waiver (Required):	The minor-street stop-control with a right-turn lane on SR 212 / Browns Mill Road and a channelized right-turn on the new driveway was identified as the only feasible control method in Stage 1. The approach operates acceptably in both peak hours.
Proposed Intersection Control:	Conventional (Minor Stop)

REQUESTED BY: _____ **Date:** _____

Title:

APPROVED BY: _____ **Date:** _____

Name:

District Engineer or (Approved Delegate)

¹ Analysis data input on this worksheet is for proposed control & configuration on form, not the No-Build data shown on the top of Stage 2

² ADT's required if available (from data collected or nearest GDOT count station site); Capacity data optional unless needed to justify basis of the waiver request.

³ Crash data (required for all existing intersections) must be entered here independent from Stage 2 worksheet inputs (not linked)

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑	↑	↑	
Traffic Vol, veh/h	7	433	1400	2	7	21
Future Vol, veh/h	7	433	1400	2	7	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	4	2	2	2	2
Mvmt Flow	8	471	1522	2	8	23

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1524	0	-	0	2009 1522
Stage 1	-	-	-	-	1522 -
Stage 2	-	-	-	-	487 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	437	-	-	-	65 146
Stage 1	-	-	-	-	199 -
Stage 2	-	-	-	-	618 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	437	-	-	-	63 146
Mov Cap-2 Maneuver	-	-	-	-	63 -
Stage 1	-	-	-	-	194 -
Stage 2	-	-	-	-	618 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	437	-	-	-	195
HCM Lane V/C Ratio	0.017	-	-	-	0.156
HCM Control Delay (s)	13.4	0	-	-	26.8
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q(veh)	0.1	-	-	-	0.5

Intersection						
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕	↕	↕	
Traffic Vol, veh/h	18	1022	577	12	5	13
Future Vol, veh/h	18	1022	577	12	5	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Yield
Storage Length	-	-	-	200	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	1111	627	13	5	14

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	640	0	-	0	1778 627
Stage 1	-	-	-	-	627 -
Stage 2	-	-	-	-	1151 -
Critical Hdwy	4.12	-	-	-	6.42 6.22
Critical Hdwy Stg 1	-	-	-	-	5.42 -
Critical Hdwy Stg 2	-	-	-	-	5.42 -
Follow-up Hdwy	2.218	-	-	-	3.518 3.318
Pot Cap-1 Maneuver	944	-	-	-	91 484
Stage 1	-	-	-	-	532 -
Stage 2	-	-	-	-	301 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	944	-	-	-	86 484
Mov Cap-2 Maneuver	-	-	-	-	86 -
Stage 1	-	-	-	-	503 -
Stage 2	-	-	-	-	301 -

Approach	EB	WB	SB
HCM Control Delay, s	0.2	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	944	-	-	-	310
HCM Lane V/C Ratio	0.021	-	-	-	0.063
HCM Control Delay (s)	8.9	0	-	-	17.4
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2